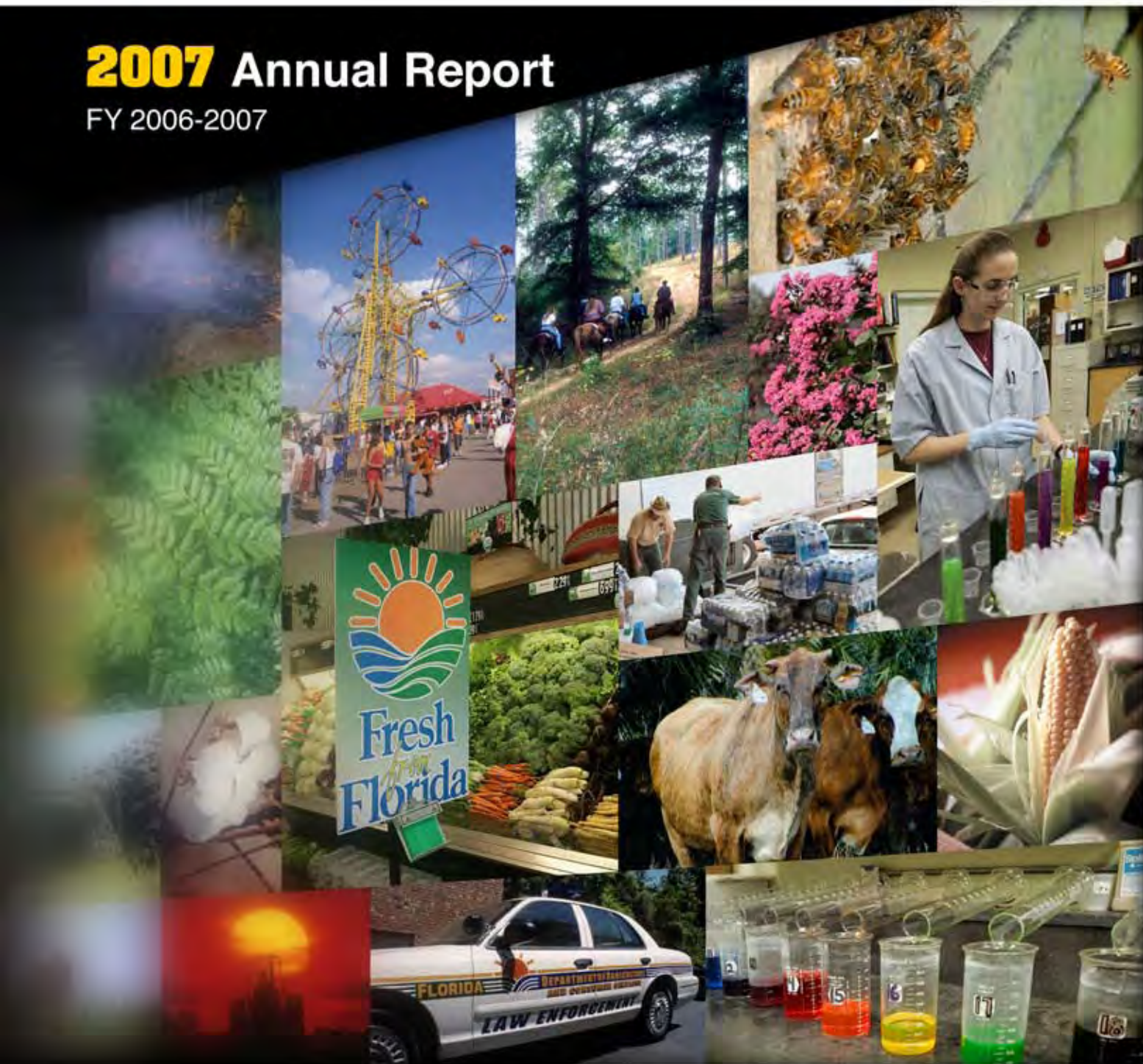


2007 Annual Report

FY 2006-2007



Florida Department of Agriculture and Consumer Services

Charles H. Bronson, Commissioner



Introduction

With over 3,000 employees working in scores of locations, the Florida Department of Agriculture and Consumer Services is the largest and most diverse state agriculture agency in the country. Supporting Florida's farmers may be our best-known role, but it is just one of our many important responsibilities. We conserve the state's agricultural and natural resources, ensure the safety and wholesomeness of food, and protect consumers from unfair and deceptive business practices. We're the people who make sure your grocery stores are clean and sanitary, that your gas pumps give you fair measure, and that your food labels tell the truth. We fight wildfires, provide food and water to disaster victims, and manage over a million acres of state forest land. Our activities are so wide-ranging, they touch the lives of virtually every Floridian every day.

Agriculture is Florida's second largest industry and has an overall economic impact estimated at \$97 billion annually. The support the Department provides agriculture helps keep the industry – and our economy – going strong. We collect and disseminate Florida agricultural statistics; enforce state animal health regulations; inspect feed, seed, and fertilizer; and help farmers fight crop pests and diseases. Not only do we assist in the production of food, we also help farmers market and sell their products. Our Division of Marketing and Development administers the "Fresh from Florida" promotional campaign and operates 13 wholesale farmers' markets that support agricultural commerce.

The health of Florida's agricultural economy is intimately connected to the health of our natural environment. In order to maintain Florida's natural resources, the Department strives to practice the best environmental safeguards. We manage pesticides to avoid groundwater contamination and protect federally listed endangered species. We work to control tropical soda apple, pink hibiscus mealybug, lobate lac scale, and other invasive exotic plants and animals that threaten agriculture and natural ecosystems. Collaborating with growers throughout Florida and with scientists at the University of Florida and other agencies, the Department develops pollution-preventing farming methods known as Best Management Practices.

The Department ensures the safety and wholesomeness of Florida's food supply through rigorous inspection and testing programs. Retail food stores and processing plants are regularly monitored for proper sanitation and safe food-handling procedures. Lab tests ensure the absence of food-borne pathogens and other contaminants. Fruits and vegetables are analyzed for the presence of pesticide residue; milk, for traces of antibiotics; and seafood, for unsafe levels of mercury. The Department checks the accuracy of product labels, net weights, and grade standards. Our laboratory staff make sure products labeled "low carb," "low fat," "low sugar," "no sugar," and "fat free" really are what their labels claim.

The Department is Florida's lead agency for consumer protection. Our Division of Consumer Services has responsibility for regulating various business industries operating in Florida, and it conducts investigations of unfair and deceptive trade practices. In addition, the division functions as the U.S. Consumer Product Safety Commission's liaison in Florida regarding product recalls, inspections, and investigations. Consumer education is the division's main focus. Each year, division personnel distribute thousands of educational brochures, speak on consumer issues at community meetings, and handle the quarter million calls that come to our Consumer Assistance Call Center.

Message from the Commissioner



This past fiscal year (2006-2007) was a tough time for Florida's farmers and consumers. Wildfires raged, gas prices soared, and the loss of our precious agricultural lands continued at a rapid pace. But difficult times bring out the best in people, and challenges can lead to innovation. During this fiscal year the Florida Department of Agriculture and Consumer Services worked to implement long-term solutions to problems too important for quick fixes. We were active on a wide range of issues, including alternative energy, natural resource protection, law enforcement, food safety, and nutrition education.

In August 2006, I hosted the first-ever Florida Farm to Fuel Summit, paving the way for alternative fuel production and use in Florida. The summit was a component of the Farm to Fuel initiative, a comprehensive effort to promote alternative energy and help position Florida as a leader in the production of bio-fuels. Our goal was and is to reduce the

country's dependence on foreign oil and preserve green space by providing Florida farmers with yet another crop to grow and a way to make a profit.

A healthy agriculture industry is dependent on a healthy environment. As part of the Lake Okeechobee and Estuary Recovery Plan, the Department was tasked with revising the nutrient content standards for fertilizers used in urban areas. The purpose is to reduce nitrogen and phosphorus pollution in Florida's fresh water bodies, including Lake Okeechobee, the "liquid heart" of the Everglades. The Department has proposed limiting the amount of nitrogen and phosphorus in fertilizers to no more than the amount needed for healthy turf maintenance. By establishing responsible nutrient use rates statewide, Floridians can continue to care for their yards without sacrificing water quality.

January 2007 ushered in one of the most active wildfire seasons in Florida history. From January to May, nearly 3,500 wildfires burned over 500,000 drought-plagued acres and tested the training, resourcefulness, and emergency response capabilities of federal, state, and local agencies. In the end, our wildland firefighters and other forestry personnel met the test, working around the clock in exhausting and hazardous conditions. When the fires were out, the focus shifted back to wildfire prevention – implementing controlled burns to reduce fuel loads and teaching Floridians in the urban-wildland interface to be "Firewise."

Many of this spring's wildfires were caused by lightning, but others were the result of human carelessness or arson. The arson cases were investigated by our Office of Agricultural Law Enforcement, which made a number of arrests. AgLaw officers are also responsible for investigating consumer fraud and inspecting highway shipments of agricultural products. I am proud to announce that AgLaw recently received state accreditation, documenting to the citizens of Florida that it adheres to the highest standards of law enforcement professionalism and is among the finest in the state.

Two of our Food Safety laboratories also achieved accreditation this year, providing them with international credibility. Achieving accreditation was an extremely difficult and time-consuming process and demonstrates the Department's commitment to ensuring a safe food supply for our state. The Division of Food Safety monitors food from farm gate through distribution and processing to retail point of sale. This year, Department personnel assisted federal agencies in three national recalls. Working weekends and overtime, inspection staff scoured retail shelves and storage rooms, meticulously checking labels and coding to remove any affected products.

Safeguarding the food supply is just one way the Department works to protect the public. Another is educating people about good nutrition. This year, the Department launched several health initiatives to help combat obesity and get Floridians eating more fruits and vegetables. Our "Super Bowl XLI Kickoff to Better Health" program provided South Florida residents with opportunities to participate in fitness activities and learn about good nutrition. With our "Xtreme Cuisine Cooking School," we took on the problem of childhood obesity, visiting middle schools around the state and teaching kids to prepare their own healthful snacks.

The Department is committed to creating a better future for all Floridians. This annual report will tell you more about our many accomplishments this year and our plans for the next.

Sincerely,



Charles H. Bronson
Commissioner of Agriculture



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Supporting Florida Agriculture



In 2006, Florida's agricultural cash receipts amounted to \$6.97 billion, 9.45 percent lower than in 2005. Cash receipts were lower for greenhouse and nursery crops, grapefruit, cattle, dairy products, broilers, wheat, and fresh tomatoes. Receipts were higher for oranges, cucumbers, eggs, honey, hay, cotton, and potatoes.

Florida leads the nation in cash receipts for oranges, grapefruit, tangerines, cucumbers, watermelon, sweet corn, and sugarcane and ranks second in cash receipts for tomatoes, strawberries, bell peppers, squash, and greenhouse and nursery crops. Florida leads the nation in production of citrus, sugarcane, foliage plants, cut floral greens, and tropical fish and ranks third in the production of fresh market vegetables.

Statistical Reporting

Reliable information is essential to making production, marketing, and policy decisions for the agricultural community. The Florida Department of Agriculture and Consumer Services shares in a cooperative federal/state program responsible for collecting and disseminating Florida agricultural statistics. Information on the state's major commodities is gathered through onsite producer surveys, voluntary mail questionnaires, and telephone and personal interviews. Statistics compiled from these data are available in over 200 reports issued annually.

Supporting Florida Agriculture

In the past year, the Florida Agricultural Statistics Service staffed an informational booth at industry trade shows for citrus and cattle as part of its public relations efforts. The booth allowed the service to promote its role in the industry and increase the visibility of its reports. The office is preparing to conduct the 2007 Census of Agriculture, which is scheduled to be mailed to every farm operator in Florida in December 2007.

Citrus

An initial citrus production forecast is issued in October and modified monthly through the citrus season based on fruit size measurements and observations on drop rate. These forecasts are based exclusively on objective data obtained directly by field personnel, including an extensive limb count survey conducted from July to September to estimate fruit set per tree. Florida's citrus growers produced an estimated 128.9 million boxes of all oranges and 27.2 million boxes of grapefruit in the 2006-2007 season.

Cash receipts for all citrus crops sold in 2006 totaled \$1.44 billion compared to \$1.67 billion in the 2005 season. Citrus accounted for 21 percent of all cash receipts in 2006.

Vegetables

Florida growers harvested fresh market vegetables from 161,200 acres in 2006. Cash receipts for all vegetables amounted to \$1.42 billion, which amounted to 20 percent of all cash receipts in 2006. Tomatoes, peppers, sweet corn, cucumbers, and snap beans accounted for the largest amount of sales among vegetable crops.



Greenhouse and Nursery Production

The total value of Florida greenhouse and nursery production exceeds \$1.7 billion. The foliage and floriculture industry contributed \$800.4 million, down from \$956.6 million in 2005.

Berries and Melons

Strawberry production for 2006 was up from the year before, resulting in cash receipts of \$239.1 million compared to \$196.8 million in 2005. Lower prices for watermelons resulted in a decrease in their total crop value to \$111 million in 2006.

Supporting Florida Agriculture



Field Crops

Potato prices in 2006 increased from the previous year, resulting in cash receipts of \$145.1 million to growers. Although sugarcane production was up from the previous year, total cash receipts declined to \$356.9 million in 2006 due to lower prices. Cash receipts for peanuts decreased to \$51.9 million, due to decreased production in 2006. Tobacco production was greatly reduced to 2.9 million pounds of tobacco, valued at \$4.3 million in 2006. Increases in production for cotton and cottonseed produced cash receipts of \$39.6 million in 2006, compared to \$31.7 million in 2005.

Other Fruits and Nuts

Receipts for other fruits and nuts, such as avocados, blueberries, mangos, and pecans, at \$98.2 million, were up from \$87 million in 2005.

Dairy

A decrease in milk production in 2006 and lower prices resulted in decreased cash receipts of \$343.6 million compared to \$421.9 million in 2005. The annual average farm gate price for milk in Florida was \$15.90 per cwt in 2006, down from \$18.60 in 2005.

Cattle and Calves

The total number of cattle and calves was up 50,000 head from 2005, but lower prices resulted in cash receipts of \$484 million compared to \$502 million in 2005.



Supporting Florida Agriculture

Poultry and Eggs

Egg sales in 2006 totaled \$115 million, up from \$100.7 million in 2005 due to higher egg prices. Broiler production was slightly down in 2006 with sales decreasing to \$181.4 million from \$201.6 million in 2005 due to lower prices.



Aquaculture

Aquaculture contributed an estimated \$57 million to total cash receipts. Tropical fish and aquatic plants accounted for the majority of the sales in this category.



Honey

Florida was third in the nation in honey production in 2006 (behind North Dakota and California) with 13.8 million pounds valued at \$14 million. There were an estimated 170,000 colonies in the state in 2006 with an average honey yield of 81 pounds per colony, five pounds per colony less than in 2005.

Fruit and Vegetable Inspection

The Department's Division of Fruit and Vegetables serves as a third party to provide on-request inspections for the purpose of certifying the quality and condition of produce shipped in and out of the state to national and international markets. The Department's services, provided in cooperation with the U.S. Department of Agriculture (USDA), enhance the marketability of fruit and vegetables produced and imported into Florida. Committed to meeting the needs of Florida's fruit and vegetable industries through fiscally responsible quality assurance and technical assistance services, the Department continually strives to find innovative and cost-effective methods of inspection.

Supporting Florida Agriculture

Agricultural Dealer's Licenses

The Department continued its support of Florida agriculture by conscientiously administering Florida's Dealers in Agricultural Products Law. This law ensures that Florida producers of agricultural products covered by the license and bond provisions receive proper accounting and payment for their products.

During fiscal year 2006-2007 the Department issued 4,622 licenses, applied \$891,105 in license fees and delinquent penalties, and managed over \$100 million in bond protection for Florida growers.

Department associates settled 68 dealer claims in the past year. Claims against dealers in agricultural products must be filed within six months from the date of sale and total a minimum of \$500. The efforts of Department associates resulted in a recovery of \$420,248.54 on behalf of Florida agricultural dealers.

The Department closely monitors dealers to make sure they maintain adequate bonds to protect Florida growers. Department associates conducted 604 bond and compliance audits of dealer's records during the year. These audits are designed to ensure that bond amounts are maintained, to determine whether unlicensed dealers were exempt from license and bond requirements, to determine if prospective licensees were conducting business in a manner requiring licensure, and to document violations of Department enforcement actions.

The Department opened 150 new enforcement cases, closed 115 cases, and collected \$87,645 in administrative fines during the 2006-2007 fiscal

year. Enforcement actions resulted in an additional \$2,234,218 of bond protection for Florida growers.

State Farmers' Markets



The Bureau of State Farmers' Markets manages four major program initiatives: State Farmers' Markets; Community Farmers' Markets; Women, Infants, and Children/Farmers' Markets Nutritional Program (WIC/FMNP); and County Fair permitting.

State Farmers' Markets tenants and clients marketed over \$665 million in wholesale value of produce, dairy, frozen fish, and value-added products during fiscal year 2006-2007. The bureau operated 13 wholesale farmers' markets during the fiscal year. These markets offer a mix of wholesale and retail produce and attendant services such as coolers, truck weigh scales, farm supply, restaurants, and brokerage sales and shipping businesses. At year's end the available space for market tenants was 85 percent occupied for a total of more than 1.9 million square feet of warehouse, office, and parking space.

Supporting Florida Agriculture

Hurricane repair projects on the affected state market sites have made major strides in the recovery from the devastating storms of 2004 and 2005. Of the sites damaged by the storms of 2004, the repairs at Sanford and Wauchula have been completed. The Sanford hurricane reconstruction project expenses were \$675,000 and the hurricane reconstruction expenses in Wauchula were \$3.7 million. The repairs at the Fort Myers State Farmers' Market site were started with an anticipated total cost of \$5.4 million and an expected completion date of December 2007. The Fort Pierce State Farmers' Market site reconstruction projects continue with a guaranteed maximum price of \$19,483,862 and are expected to be completed by April 2008. The Immokalee State Farmers' Market hurricane reconstruction has an anticipated total project cost of \$9 million to \$10 million.

More than 200 farmers operating at 23 community retail markets participated in the Women, Infants, and Children/Farmers' Market Nutrition Program (WIC/FMNP) this year. By promoting the consumption of fresh fruits and vegetables to WIC mothers and children, this program encourages a healthy diet while boosting farmers' sales at participating locations. The program was offered in 17 counties and provided over 34,000 WIC recipients with information about proper nutrition and the importance of fresh fruits and vegetables in their daily diets.

The County Fair permitting section issued permits for 50 fairs. Approximately \$300,000 was distributed to these fairs and other public organizations as agricultural premium and awards reimbursements. These awards encourage participation by Florida's youth in agricultural programs.

The popularity of retail farmers' markets continues to grow in Florida. There are over 75 retail markets promoted on the Department's web site.



Livestock and Domestic Animals

The Division of Animal Industry enforces state animal health regulations to prevent, control, and eradicate infectious or communicable diseases of livestock and domestic animals. The division also works to protect the state from animal pests and diseases that threaten economic and public health.

Supporting Florida Agriculture

Through the efforts of the Bureau of Animal Disease Control and Bureau of Diagnostic Laboratories, the division:

- Monitors livestock and poultry on farms and ranches and at animal concentration points for disease status and carries out intensive animal disease investigations utilizing state-of-the-art laboratory testing for the diagnosis of domestic diseases, as well as emerging and potential foreign animal diseases.
- Works with producers and other cooperators to control animal diseases to ensure the health of the animal industries and to ensure safe and wholesome animal food products.
- Regulates, administers, and enforces laws relating to animal health to prevent the introduction of diseased animals into Florida and to prevent the spread of diseases within the state.
- Monitors companion animal health issues, provides consumer protection assistance, and supports rule and legislation development to ensure the overall health of small animal populations and industries in Florida.
- Provides information to livestock and poultry producers, private practitioners, and the public about regulatory requirements and Best Management Practices through news releases, brochures, the Internet and personal visits.
- Develops, implements and tests emergency response plans in the event of foreign animal diseases and other natural or manmade disasters affecting animals and animal food productions.

Emergency management is also a responsibility of the division. Eighteen Emergency Support Functions (ESF) were established in the Florida Comprehensive Emergency Management Plan. Each ESF is headed by a lead or primary agency or organization, which was selected based on its authorities, resources, and capabilities in that functional area. The Department's Division of Animal Industry is the primary lead responder for ESF-17, which was organized to ensure rapid response to animal and agricultural needs in a disaster or emergency scenario.

Animal Disease Control

The Department, through the Division of Animal Industry, is responsible for administering the state's animal disease prevention, control and eradication programs. In cooperation with the USDA, the Department has moved beyond traditional perceptions of animal disease control and eradication by addressing public health issues and major economic impacts by developing new programs. The recent Equine Herpes Virus-1 (EHV-1) outbreak in Florida and the reemergence of brucellosis, tuberculosis, and intermittent outbreaks of Vesicular Stomatitis and pathogenic Avian Influenza in other states emphasizes the necessity of having a strong, active animal disease monitoring program in place with an open line of communication with public officials.

Supporting Florida Agriculture

Rather than perceiving disease control and eradication programs as bureaucratic obstacles, the public is demanding that more be done to protect the nation's animal-origin food supply and companion livestock. These needs – as perceived by the producer, the consumer, and associated animal industries – will influence the overall acceptability and effectiveness of future disease control and eradication programs.

One such disease emergency was the introduction of a neurologic form of Equine Herpes Virus at the onset of the 2007 horse show season in Palm Beach County. The introduction of this contagious and highly fatal disease occurred via a shipment of horses imported into Florida from Germany through New York. A rapid response, utilizing an emergency incident command post, required more than 4,000 staff hours to successfully control and eliminate this outbreak.

The Department's program activities take into consideration the changing face of animal industries in Florida and throughout the United States. Numerous species previously considered exotic or wildlife have straddled or crossed the line between wildlife and agriculture. Government and industry are faced with challenging learning curves in veterinary medicine and disease risk analysis for unfamiliar species, with few or no precedents. The Department recognizes the need to include these emerging animal industries with traditional livestock industries so they can coordinate and respond to a greater range of issues.

National Animal Identification System (NAIS)

The threat of a foreign animal disease outbreak or other animal health event in the United States is real. Unfortunately, the timing and severity of an

outbreak are impossible to predict. The National Animal Identification System (NAIS) is a modern, streamlined information system designed to enable producers and animal health officials to respond quickly and effectively to animal health events in the United States. The foundation of the system is a database of premises where livestock, poultry, and equine are held. The NAIS program is a voluntary state-federal-industry partnership which will help to protect livestock, poultry, and equine owners and reduce hardships caused by an animal disease outbreak or other animal health event.

The individual animal identification component is intended to identify all agricultural animals as they come into contact with, or are intermingled with, animals other than herd mates from their premises of origin. The USDA long-term goal is to establish a system that can identify all animals that have had direct contact with a foreign animal disease or domestic disease of concern within 48 hours of discovery. Further development of a nationwide animal identification and tracking system will help secure the health of the national herd and ensure consumer confidence.

The NAIS is being implemented by the Division of Animal Industry on a voluntary basis. Since 2004, Florida has entered into cooperative agreements with the USDA to implement a premises identification system and work with producers and industry groups on pilot animal identification projects. Division personnel continue to work with producers and industry leaders to develop practical approaches to meet the animal health and animal movement challenges of today's global marketplace.

Supporting Florida Agriculture



As of June 30, 2007, a total of 4,050 Florida premises were registered. These premises include all species of livestock and each of Florida's USDA-approved livestock auction markets. Florida was the first major cattle-producing state to have 100 percent registration of its livestock markets. It is estimated that more than 85 percent of Florida's total cattle inventory is now housed on registered premises. The Division of Animal Industry continues to share information with and receive input from industry leaders representing all included species.

Pilot projects continue to test the utility of electronic animal identification for tracking and ranch management. Participating producers view the feedback of performance and health-related information as an increasingly valuable ranch management and marketing tool.

The calf segment tracked electronically identified (EID) Florida calves in interstate commerce while evaluating tag retention and electronic readers and technology necessary to support the electronic Interstate Certificate of Veterinary Inspection (ICVI). Approximately 12,000 Florida calves shipped to Texas and Kansas feedlots were part of this project.

Supporting Florida Agriculture

The cull cow segment tracks cattle – individually identified by conventional or electronic means to verify the farm or ranch of origin and age – as they move through the processing system. Florida producers received industry-driven monetary premiums for these source-verified cattle.

Participating ranchers were eager to register their premises to be eligible to gain this marketing advantage. Electronic identification and visual tags were provided to stimulate further application of individual animal ID.

Several of Florida's major ranches have electronically identified each animal in their producing herds as well as each calf crop. Individual electronic identification of the brood cows provides for enhanced management and recordkeeping. Individual identification of the calves allows the return of production data for management decisions and also allows the calves to be marketed as source-verified.

The equine segment of the NAIS has included education and outreach, premises registration, and individual horse identification using microchips. The equine micro-chipping project received positive feedback from the equine community as a rapid, reliable form of individual identification for horses. This technology can also be used to monitor movement through the state's Agricultural Interdiction Stations.

The Florida Equine Passport Card program has continued to grow with over 1,200 cards being issued during this fiscal year. Eleven states now accept the Florida Equine Interstate Passport Card, which extends the duration of the Official Certificate of Veterinary Inspection (OCVI) from the standard 30-day period to six months, for interstate movement to equine events. The negative EIA

Verification Card has also been received well by the horse owners as an alternative to the paper Coggins form used for interstate movement. One of the requirements to receive either card is a completed NAIS premises registration application.

Animal Movement

The monitoring of the movement of livestock and poultry into Florida by the Official Certificate of Veterinary Inspection is the Department's first line of defense against the inadvertent importation of animal diseases. When diseases threaten livestock and poultry in other parts of the country, the Department may enact additional regulations for animals being imported into Florida, often requiring prior notification, permission and permitting from the Department before shipments are allowed into Florida through the Agricultural Interdiction Stations.

Health Certificates

During fiscal year 2006-2007, the division processed 44,480 certificates representing more than 697,502 animals moving into or out of Florida. Beef and dairy cattle were the most numerous animals shipped, while horses accounted for the highest number of shipments moving through Florida. Other species accounting for much of the animal movement into and out of Florida were swine, goats, sheep, and exotic species. All livestock transported into Florida are subject to certificate verification by Agricultural Law Enforcement officers.

Supporting Florida Agriculture

Carcass Hauler Permits

The purpose of Carcass Hauler Permits is to prevent, control, or eradicate diseases that may be transmissible to other animals or humans. During fiscal year 2006-2007, 589 permits were issued. By June 30 of each year, individuals or businesses are required to apply for and receive a permit to haul any dead, dying, disabled, or diseased animal, any product of an animal that died other than by slaughter, or any inedible animal product not meant for human consumption.

Livestock Haulers Permits

The purpose of the program is to protect owners of animals and legitimate businesses that haul livestock by improving control over livestock thefts and other illicit livestock operations. During fiscal year 2006-2007, the division issued 1,816 livestock hauler permits/tags. These permits/tags are required for each vehicle hauling or transporting livestock for hire on Florida's public roads or highways.

For a fee, a special livestock hauler license tag is issued and is valid for the current calendar year. Starting in 2006, the division began using decals on issued tags. Every fifth year after 2006, livestock haulers will receive a new tag and a decal for that year.

Marks and Brands Program

Livestock brand registration was centralized at the state level in 1945. The change from county by county registration was instituted to prevent duplication of brands by different owners, especially as commerce and trade increased among different parts of the state.

In fiscal year 2006-2007, the division issued 240 new brand certificates, transferred 22 brands, and renewed 544 certificates. Currently, the total number of brands registered in Florida is 5,293.

Branding of livestock in Florida is not required, but, if done, owners must register their brands with the state. Registration is accomplished by submitting an application to the division with a fee of \$10.

Poultry

Several important diseases can have a disastrous impact on the poultry industry if allowed into the state. In an effort to carry out its mission of surveillance, prevention, and control, the division conducts inspections of poultry premises, live bird markets, small animal sale markets, botanicas, fairs and exhibitions, imported birds, and backyard flocks in accordance with state rules and regulations and USDA's National Poultry Improvement Plan (NPIP). Through these programs, information on disease control and biosecurity on the farm has been distributed throughout the state in an effort to inform the public about their role in controlling these diseases.

Supporting Florida Agriculture

Avian Influenza

Due to the recent outbreaks of Avian Influenza (AI) H5N1 in other countries and in response to increased public concerns, Avian Influenza surveillance has become a major focus for the Department and the Division of Animal Industry. An Avian Influenza State Response and Containment Plan was developed and a Poultry Emergency Disease Committee was established. Members on the committee consist of state, federal and industry representatives. In cooperation with the USDA, the expanded Avian Influenza surveillance program now includes sample collection and inspections at botanicas, live bird markets, animal sale markets, fairs/exhibitions, backyard flocks, sick bird investigations, and commercial flocks.

Globally, there are many different strains of AI virus causing a variety of clinical illnesses in poultry. Viruses can infect chickens, turkeys, pheasants, quail, ducks, geese, and guinea fowl, as well as a wide variety of other birds. Migratory birds, especially waterfowl, have been shown to act as a natural reservoir for the less infectious strains of the disease. AI viruses can be classified into low pathogenicity (LPAI) and high pathogenicity (HPAI) based on the severity of the illness they cause. HPAI is the highly transmissible and lethal form of the disease that, once established, spreads rapidly. Because some LPAI viruses can mutate into HPAI viruses, surveillance for both is extremely important. Though surveillance continues for the existence of LPAI, with the emergence of the lethal HPAI/H5N1 (over the past year), there has also been an increase in scrutiny and testing of birds in all facets of the industry for the presence of this deadly strain.

Department-authorized agents tested 98 small animal sale markets, botanicas, and live bird markets for AI, resulting in 3,085 birds tested.

Over 900 commercial poultry premises were tested and 13,615 samples were submitted for AI in accordance with the NPIP AI monitoring program.

Pullorum Disease Program Work

Fowl Typhoid (FT) and Pullorum Diseases (PD), affecting chickens and turkeys primarily, are caused by *Salmonella Gallinarum* and *S. Pullorum*, respectively. Clinical signs in chicks and poults include anorexia, diarrhea, dehydration, weakness, and high mortality. In mature birds, FT and PD signs are decreased egg production, fertility, and hatchability and anorexia and high mortality rates. If allowed to spread, these diseases can have damaging effects on the poultry industry. In conjunction with the USDA's National Poultry Improvement Plan (NPIP) program, the state tests birds for Pullorum Typhoid and other deadly contagious poultry diseases.

A total of 273 NPIP program flock inspections were conducted during fiscal year 2006-2007. At these NPIP premises, there were 8,266 birds tested for Pullorum Typhoid (PT) and 312 birds tested for AI during this fiscal year. Department-authorized agents continue to inspect and test for PT and AI on poultry coming into fairs for exhibition. During 2006-2007, the Department inspected 7,490 birds at 49 fairs. Authorized agents tested 3,657 of the birds exhibited at the fairs for PT and 1,687 for AI.

Supporting Florida Agriculture



Other Poultry Program Work

Monitoring and surveillance activities for *Mycoplasma gallisepticum* (MG), *Mycoplasma synoviae* (MS) and AI on commercial poultry breeding flocks were also continued for the 2006-2007 fiscal year. During fiscal year 2006-2007, 149 flocks were tested and 12,698 samples were submitted to the division's diagnostic laboratories for MG and MS testing.

The division continues to conduct quarterly hatchery inspections at commercial egg, meat, and turkey premises in accordance with the NPIP; 13 inspections were performed and 468 samples were submitted to the state diagnostic laboratories. The division also investigates all sick bird and unusual

dead bird reports and (when possible) takes samples for testing for Avian Influenza and Pullorum Typhoid. During fiscal year 2006-2007, the Department conducted 66 sick bird investigations representing 442 birds being tested for AI. Department inspectors also conducted routine inspections of dead bird disposal methods at commercial poultry farms. During the 2006-2007 fiscal year, 478 such inspections were conducted.

The Poultry Best Management Practices (BMPs) Quality Assurance Program in the Suwannee River Water Management Area was implemented in 2001. Currently, 199 poultry farms are enrolled in the program and inspected by division staff.

Supporting Florida Agriculture

The division implemented a poultry database for permitting all poultry and eggs imported into the state or transshipped through Florida to other countries. During fiscal year 2006-2007, 1,603 import permits and 1,347 transshipment permits were issued, representing 34,966,550 live birds and 16,667,886 dozen hatching eggs.

Cattle

During the 2006-2007 fiscal year, 447,141 cattle were inspected at livestock markets.

Brucellosis

Brucellosis is a contagious, costly disease of ruminant animals that also affects humans. Although brucellosis can attack other animals, its main threat is to cattle, bison, and swine. The disease is also known as contagious abortion or Bang's disease. In humans, it is known as undulant fever because of the severe intermittent fever accompanying human infection, or Malta fever because it was first recognized as a human disease on the island of Malta. The disease is caused by a group of bacteria known scientifically as the genus *Brucella*. Three species of *Brucella* cause the most concern: *B. abortus*, principally affecting cattle and bison; *B. suis*, principally affecting swine and reindeer but also cattle and bison; and *B. melitensis*, principally affecting goats but not present in the United States. In cattle and bison, the disease currently localizes in the reproductive organs and/or the udder. Bacteria are shed in milk or via the aborted fetus, afterbirth, or other reproductive tract discharges.

There were 340 herds representing a total of 61,083 cattle tested in the field for brucellosis during the fiscal year, and two were found to be infected with

B. suis. An additional 117,818 cattle were tested at slaughter with five positive tests. None of the animals tested positive for *B. abortus*, and the state maintains the classification of Class Free. At livestock markets, 907 cattle were tested, with none found to be infected. During the same period, 47,946 cattle were vaccinated against brucellosis.

Tuberculosis

Tuberculosis (TB) is a contagious disease of both animals and humans. It is caused by three specific types of bacteria that are part of the *Mycobacterium* group: *Mycobacterium bovis*, *M. avium*, and *M. tuberculosis*. Bovine TB, caused by *M. bovis*, can be transmitted from livestock to humans and other animals. No other TB organism has as great a host range as bovine TB, which can infect all warm-blooded vertebrates. *M. avium* can affect all species of birds, as well as hogs and cattle. *M. tuberculosis* primarily affects humans but can also be transmitted to hogs, cattle and dogs.

Last year in Florida, 65 herds were tested for tuberculosis. The herds represented 3,370 cattle; no cattle were found to be infected. Surveillance sampling of tuberculosis-like lesions in slaughter cows yielded no positive animals.



Supporting Florida Agriculture

Transmissible Spongiform Encephalopathies

Transmissible Spongiform Encephalopathies (TSE), or prion diseases, are rare forms of progressive neurodegenerative disorders that affect both humans and animals and are caused by agents that produce changes in the brain. TSE typically have incubation periods ranging from several months to years before symptoms become apparent. No conventional serologic test can identify TSE-infected animals, and so TSE are usually identified from the brain tissue of dead animals. There is no vaccine or cure for these diseases, and once symptoms appear, TSE are invariably fatal.

The TSE family of diseases includes Bovine Spongiform Encephalopathy (BSE); scrapie, which affects sheep and goats; Transmissible Mink Encephalopathy (TME); Feline Spongiform Encephalopathy (FSE); Chronic Wasting Disease (CWD) of deer and elk; and in humans, kuru, both classic and variant Creutzfeldt-Jakob Disease (CJD and vCJD), Gerstmann-Strausler-Scheinker syndrome, and fatal familial insomnia. TSE have also been reported in captive exotic ruminants, and in exotic and domestic cats. The agent isolated from several of these cases is indistinguishable from BSE in cattle, suggesting the occurrence of TSE in these species resulted from BSE-contaminated feed.

Bovine Spongiform Encephalopathy (Mad Cow Disease)

Bovine Spongiform Encephalopathy (BSE), widely referred to as “mad cow disease,” was first diagnosed in 1986 in Great Britain. BSE was discovered in Canada in 2003, in Washington State in 2004, in Texas in 2005, and most recently in

Alabama in 2006. The BSE-infected cow from Washington State was later found to have originated from a Canadian herd. These isolated cases generated a rapid response from state and USDA officials, and resulted in new control, testing, and surveillance programs designed to rule out and prevent further cases in U.S. herds. The Department continues to work with federal and state partners to conduct surveillance and to prevent the introduction of BSE from foreign sources. Federal funding for enhanced surveillance ended in December 2006 and future testing will be limited to suspect cases. During the 2006-2007 fiscal year, 93 samples were collected by the Department from Florida herds and tested by the National Veterinary Services Laboratory (USDA). All were confirmed negative.

Johne's Disease

Johne's disease is a contagious, chronic, and usually fatal infection that affects primarily the small intestine of ruminants. All ruminants are susceptible to Johne's disease. Johne's disease is caused by *Mycobacterium paratuberculosis*, a hardy bacterium related to the agents of leprosy and tuberculosis. The disease is worldwide in distribution. Signs of Johne's disease include weight loss and diarrhea with a normal appetite. Several weeks after the onset of diarrhea, a soft swelling may occur under the jaw (bottle jaw). Bottle jaw, or intermandibular edema, is due to protein loss from the bloodstream into the digestive tract. Signs are rarely evident until two or more years after the initial infection, which usually occurs shortly after birth. Animals are most susceptible to the infection in the first year of life.

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For fiscal year 2006-2007, the Florida Voluntary Johne's Program had 252 dairy and beef operations enrolled. The Live Oak Diagnostic Laboratory conducted 52,233 tests. The state of Florida is successfully meeting the guidelines developed cooperatively with the USDA for continued funding of this program.

The Johne's Dairy Demonstration Project is ongoing in Davie and has continued to offer additional information on management impacts on the transmission and control of Johne's Disease. This project is a collaborative state-federal venture and is working toward advancements in testing procedures with Purdue University.

Small Ruminants (Sheep and Goats)



During fiscal year 2006-2007, the Department inspected 15,174 small ruminants at livestock markets and 27,080 sheep and goats at small animal sale markets. Division staff performed 5,471 goat/sheep field inspections.

Tuberculosis

Tuberculosis (TB) in goats and sheep, though considered a rare occurrence, is caused by one or more of the three types of Mycobacterium: *M. bovis*, *M. avium*, and *M. tuberculosis*. *M. bovis* infects all warm-blooded vertebrates, including humans; while *M. avian* is the species that causes most of the infections in sheep. The bacterium can be transmitted to humans via milk, so dairy herds should be tested. Eight sheep and 462 goats were tested for tuberculosis and all were found to be negative. There are 14 certified tuberculosis-free goat herds in Florida.

Brucellosis

Brucellosis is more common in goats than in sheep, and is caused by *Brucella melitensis*. The sign most often associated with brucellosis in goats is abortion in goats, but not all animals that abort have brucellosis and not all brucellosis-infected animals will abort. The organism can be transmitted via blood, vaginal discharge, milk, aborted fetuses, and placenta. The danger of human infection and economic losses makes this another important disease to control and eradicate. Twelve sheep and 654 goats were tested for brucellosis and all were found to be negative. There are 13 certified brucellosis-free goat herds in Florida.

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Scrapie

Scrapie is one of a number of diseases of ruminants classified as Transmissible Spongiform Encephalopathies (TSE). Scrapie affects the central nervous system of sheep and goats, but clinical signs may not appear until the animal is five years of age or older. The USDA's Voluntary Scrapie Flock Certification Program provides participating producers with the opportunity to protect their sheep from scrapie and enhance the animals' marketability by having them certified scrapie-free. Florida now has 45 flocks participating in this program, and the number of certified flocks remains unchanged at two. Under USDA-APHIS rules and regulations, and the Scrapie Eradication Uniform Methods and Rules, all sheep and goats in Florida are required to have an official USDA-APHIS approved tamper-resistant individual animal identification tag. There are now 2,584 herds registered under this program.

Equine

Contagious Equine Metritis

Contagious Equine Metritis (CEM) is a highly contagious reproductive disease that can affect all equids and is caused by the bacterium *Taylorella equigenitalis*. The infection can result in short-term infertility in mares that is sometimes associated with a vaginal discharge and, rarely, abortion. Mares can become unapparent carriers of the bacterium in their reproductive tracts and can shed the organism into the environment and transmit it through subsequent breeding. Stallions do not develop clinical signs but can carry the organism on their genitalia for years and spread the disease by breeding susceptible mares.

CEM is considered an exotic disease in the United States, which means it is not found in the native horse population; however, the CEM bacterium was cultured in three imported stallions in a Midwestern state this past fall. Currently, there are at least 25 countries and territories where CEM exists, including a number of the member states of the European Union. CEM is a serious venereal disease because it is highly contagious. There is no vaccine against CEM, but there are ways to detect infected horses and to rid infected stallions and mares of the bacterium via treatment and testing protocols.

Florida utilized 22 Approved CEM Quarantine Facilities to handle the CEM importation requirements for horses entering the United States. During fiscal year 2006-2007, 203 imported stallions and mares were processed through these facilities. There were no positive horses detected.

Equine Infectious Anemia

Equine Infectious Anemia (EIA), also known as "swamp fever," is an incurable blood-borne disease that affects only members of the equine species. It is transmitted primarily by large biting flies but may also be transmitted by contaminated needles and surgical instruments and through breeding. Once an animal is infected, it remains infected for the rest of its life. While some horses die from acute infections, most remain as seemingly symptom-less carriers. However, infected animals are still capable of transmitting the disease and pose a threat to healthy animals. There is currently no vaccine or effective treatment for this disease.

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EIA is a disease of worldwide significance. In some foreign countries, the disease incidence may be as high as 50 percent or more. In the United States, it occurs in most every state; however, 90 percent of the cases occur in what is known as the “hot zone,” those states bordering the South Atlantic Coast, the Gulf of Mexico, and the Mississippi River Basin, including Oklahoma and Texas. Disease risk in these areas is higher because environmental conditions are more favorable for prolonged insect vector seasons.

Florida's equine industry continues to be a vital economy to the state, and the Department is working hard to safeguard this important state resource from the potential devastating effects of this disease. With support and cooperation from the state's equine industries, Florida was one of the first states to implement an EIA disease control program.

Last year, more than 2.1 million horses were tested for EIA nationally. In Florida, more than 140,115 horses were tested, with only six reactors disclosed. On a national level, only 10 to 15 percent of the equine population is tested annually, but in Florida, approximately 30 percent of the population is tested annually. In spite of being in the EIA “hot zone,” Florida's EIA control program keeps the disease incidence at a very low rate (0.013 percent), which is below the national level of 0.015 percent. This can be attributed to the Department's effective EIA control program and strong support from the state's equine industry.

Equine Piroplasmosis

Equine Piroplasmosis (EP) is an animal disease caused by the parasitic organisms *Babesia equi* and *Babesia caballi*, and is primarily transmitted to

horses by ticks. The greatest risk of introduction of this disease is through importation of horses from countries where EP is endemic.

Florida is the only state that monitors the status of horses imported from Puerto Rico and the U.S. Virgin Islands, where EP is endemic. Florida requires all horses to be negative for EP prior to shipment and to be retested 30 to 60 days after arrival. Last year, the Department issued 76 permits covering 86 horses.

Arboviruses

Arthropod-borne viruses (arboviruses) are viruses that can be transmitted to humans and horses by mosquitoes. Arboviral infections in humans and horses may result in development of a fatal case of encephalitis: inflammation of the brain and spinal cord. These viruses are maintained in nature through continuous transmission between natural reservoir hosts (primarily wild birds) and certain species of mosquitoes (disease vectors). Humans and horses do not contribute to the spread of these diseases and, as such, are considered “dead-end” hosts. Although other animals are susceptible to arbovirus infections, humans and horses are most susceptible to developing clinical disease. The Department is actively involved in the monitoring of equine populations for Eastern Equine Encephalomyelitis (EEE) and West Nile Virus (WNV).

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Eastern Equine Encephalomyelitis

Eastern Equine Encephalomyelitis (EEE) is one of several arboviruses transmitted by infected mosquitoes that may cause fatal encephalitis in humans and horses. Mosquitoes become infected with the virus after feeding on wild birds.

Transmission of EEE from horse to horse or horse to human via mosquito bites is highly unlikely because humans and horses are poor reservoirs for the virus. In humans and horses, the mortality rate is extremely high: 50 percent or more in humans and 80 to 90 percent in horses.

EEE is most often detected in horses during the months of May through September. Florida averages over 74 confirmed cases of EEE each year. Many of these cases appear in the same areas year after year. Mosquito activity in Florida may occur on a year-round basis; therefore, cases of EEE may be reported during any given month. About every seven to 10 years, the number of cases reported reaches epidemic proportions and may be well over 100. In 2003, the number of cases reached epidemic levels with 207 cases being reported. During fiscal year 2006-2007, there were only 14 positive equine cases with additional tests pending results. This decrease was due to several factors, primarily the exceptionally dry weather.

West Nile Virus

West Nile Virus (WNV) is another mosquito-borne viral disease that may cause encephalitis in humans and horses, but unlike EEE, the clinical course of the disease is not as severe, and mortality rates are much lower: 25 percent to 30 percent in horses and less than 10 percent in humans.

WNV is commonly found in wild birds, humans, and other vertebrate animals in Africa, Eastern Europe, Western Asia, and the Middle East, but until 1999 had not been documented in the Western Hemisphere. During the late summer of 1999, WNV was identified in New York City for the first time. By the end of the year, cases in wild birds, humans, and horses had been documented in three northeastern states. The virus survived the winter, and during 2000 continued to spread to 12 eastern coastal states.

By 2001, the virus had spread to 18 states, including Florida. Across the country, more than 730 equine cases were confirmed, with 156 fatalities. Florida alone reported 492 cases with 82 deaths. In 2002, WNV expanded rapidly westward. Almost 1,500 equine cases were reported in 40 states. Approximately one-third of the affected horses died. Florida reported 499 cases with 92 horse deaths. In 2003, there were 117 equine cases reported. This number has continued to decline in horses, and in fiscal year 2006-2007, there were no positive cases confirmed.

The Department continues to work closely with its other Arboviral Working Group partners to provide valuable surveillance data on equine cases. The EEE/WNV Equine Database has been an invaluable tool in tracking these diseases and reporting them to the working group in a timely manner. Early detection and reporting of arboviral cases help to warn citizens to take precautions against mosquito bites and to remind horse owners to ensure that their horses are appropriately vaccinated.

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Swine

For fiscal year 2006-2007, 70,114 swine were inspected on 2,445 premises by field personnel, 20,530 were inspected at livestock markets, and 7,125 were inspected at fairs and shows.

Classical Swine Fever

Classical Swine Fever (CSF), also known as hog cholera, is a highly contagious viral septicemia affecting only swine. It has been eradicated from the United States since 1976. As the world's second-largest exporter of pork, the U.S. pork industry would suffer catastrophic losses should there be a CSF outbreak. Florida must remain vigilant in its surveillance for the emergence of foreign animal diseases because of its location and

high feral swine population, the existence of garbage feeders, and increases in international travel. During the past fiscal year, in accordance with a state-federal cooperative agreement, a targeted surveillance program of slaughter plants and high-risk swine populations (garbage feeders, feral swine) was begun. In 2006-2007, 6,503 nasal swab and/or tonsil samples were submitted to the state diagnostic laboratory for testing. Three hundred and eighty-eight serum (blood) samples were submitted to the U.S. Department of Agriculture Foreign Animal Disease Laboratory for testing. No positive case was confirmed.

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Garbage Feeders

The cooperative State-Federal Swine Health Protection Act established standards for feeding waste to swine designed to prevent the introduction of foreign animal diseases such as Foot-and-Mouth Disease and Classical Swine Fever (CSF) into U.S. herds. As the primary entity charged with fulfilling the requirements under this act, state inspectors have the responsibility of conducting monthly checks at facilities that collect edible waste food products that are cooked and fed to swine. During fiscal year 2006-2007, the Department licensed 89 garbage feeder operators and carried out 1,211 inspections. Through these inspections, 55,745 garbage-fed swine were evaluated and, if needed, tested for disease.

Swine Brucellosis and Pseudorabies (Aujeszky's Disease)

Brucellosis is a contagious, costly disease affecting ruminants, swine, and humans. Caused by a bacterium, it affects livestock by causing abortion, low fertility, and lameness. Under the Cooperative State Federal Brucellosis Eradication Program, Florida is classified a brucellosis-free state for its commercial production swine. Like brucellosis, pseudorabies is a deadly disease of pigs that can be spread to cattle, horses, sheep, goats, dogs, and cats. An infection with this viral disease leads to high mortality in newborn piglets, and older pigs can become carriers of the virus for life. A voluntary cooperative eradication program for pseudorabies was established in the United States in 1989 and involves industry and federal and state government. The program's primary activities include surveillance, herd monitoring, and herd cleanup. Swine producers that wish to have Qualified/Validated status or Modified-Monitored/

Validated status for these two diseases must first pass a risk assessment test and complete a herd health plan. Florida is classified a pseudorabies-free state (also within the Commercial Production Swine herds). For fiscal year 2006-2007, 824 animals were tested for pseudorabies and 824 animals were tested for swine brucellosis. One herd qualified as brucellosis-free and pseudorabies-free.

Reportable Animal Disease Tracking

Reportable diseases are those considered dangerous and transmissible. They can seriously impact animal, and sometimes public health. Early disease detection is instrumental for effective control and eradication. Having a list of reportable diseases gives the state a road map to follow in carrying out its mission of protecting its populace from animal pests and diseases, which could have major economic and public health consequences. From that list, the Department has developed a database on which information concerning reportable animal disease investigations can be entered and evaluated. For fiscal year 2006-2007, 282 reportable disease investigations were carried out by Department personnel.

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Cervidae

Florida's captive cervidae industry continues to grow, increasing by more than 24 percent as compared to fiscal year 2005-2006. While this industry is licensed primarily by the Florida Fish and Wildlife Conservation Commission (FWC), the Department is a partner working with disease control issues and importation policies. A newly formed Florida Deer Farmers Association, with 105 active members, is working with the Department and game biologists to improve the herd health and genetics of Florida's captive cervidae herds.

The Department's captive Cervidae Herd Health Plan requires mandatory testing of all animals that die or are killed if they are older than 16 months of age. Passive surveillance of symptomatic wild deer is also under way. To ensure these requirements are enforced, state personnel work with owners of captive cervidae herds on disease management programs. They visited over 350 premises during the past fiscal year. No animals with positive results for tuberculosis, brucellosis, or CWD have been found.

The Department continues to monitor the status of certain diseases affecting cervidae in other regions of the United States.

Chronic Wasting Disease

Chronic Wasting Disease (CWD) is a Transmissible Spongiform Encephalopathy (TSE) of deer and elk. To date, this disease has been found only in cervids (members of the deer family) in North America. First recognized as a clinical "wasting" syndrome in 1967 in mule deer in a wildlife research facility in northern Colorado, it was identified as a TSE in 1978. CWD is a progressive disease that attacks the brains of infected animals, causing the animals to become emaciated, display abnormal behavior, lose bodily functions, and subsequently die. CWD has become of particular concern due to its lack of known prevention and treatment, lack of a live animal diagnostic test, and unknown origin and means of transmission. There is no known relationship between CWD and any other TSE of animals or people, and there is no evidence that CWD poses any risk to human health.

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On April 9, 2002, the Department issued an emergency rule, 5C-ER-02-1, Chronic Wasting Disease. Current growth and resultant rapid widespread movement in the cervidae farming industry are increasing the potential for the spread of CWD and other diseases of cervidae. Due to the potential threat CWD poses to Florida's captive and free-ranging cervidae populations, the emergency rule enacted a 90-day ban on importation of cervidae from any state or location with reported cases of CWD and a 90-day restriction on importation of cervidae from all other states or locations. A permitting and reporting system was rapidly implemented by the Department to monitor interstate and intrastate movement of cervidae. The final rule for cervidae, Chapter 5C-26, Florida Administrative Code, became effective on November 27, 2002. This rule requires that cervidae being imported into Florida originate from a herd that participates in an official CWD surveillance/prevention program, be free of CWD for at least 60 months prior to importation, and originate from accredited tuberculosis-free and brucellosis-free herds. It also requires that all captive cervidae being transported within the state must originate from, and be moved to, premises currently licensed by FWC and currently enrolled in the Division of Animal Industry's Cervidae Herd Health Plan (CHHP) program. Since Rule 5C-26 became effective, the number of approved CHHP program herds has increased from 93 herds in 2002 to 284 as of June 30, 2007. Additionally, all cervidae being transported into or within Florida are required to be accompanied by a Certificate of Animal Movement, issued by the division within 30 days prior to movement.

A federal CWD Herd Status Rule that will place specific requirements on cervidae being moved from state to state is still under consideration before becoming effective. The Division of Animal Industry is continuing to work with Florida's captive cervidae herd owners to help them achieve CWD Herd Status.

CWD has been diagnosed in both captive and free-ranging elk, mule deer, white-tailed deer, and black-tailed deer located in Canada, Colorado, Illinois, Kansas, Minnesota, Montana, Nebraska, New Mexico, South Dakota, and Wisconsin. The Department continues to work with the cervidae industry, USDA, and other state and federal agencies to prevent the introduction of CWD and conduct surveillance in farmed and wild cervidae populations in Florida. During the 2006-2007 fiscal year, 610 samples from free-ranging deer and 20 from captive cervidae herds were submitted to the Kissimmee Diagnostic Laboratory or other approved USDA laboratories, and all were reported as negative.

Companion Animal and Small Animal Programs

In 2003, the Division of Animal Industry designated a separate program area to monitor companion animal health issues within the state and ensure compliance with existing rules and legislation affecting companion animals. Efforts have continued and expanded as compliance with interstate and intrastate small animal movement requirements, health certification by accredited veterinarians in Florida, consumer protection and assistance, and rule development/legislative support areas are monitored.

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A tracking system was implemented to address consumer complaints involving health certification and the sale of small animals (dogs and cats), covered by Section 828.29, F.S., the Pet Law, and Section 585.145, F.S., relating to the control of animal diseases as well as Departmental rules. A total of 263 complaints were processed. These complaints involved 247 dogs and 16 cats and included complaints against 82 pet stores, 76 breeders, 55 brokers, 19 veterinary clinics, four private sellers, three boarding kennels, and four miscellaneous subjects.

Mediation of consumer complaints resulted in refunds of purchases in the amount of \$22,792. Twenty-three cases/complaints were referred to other agencies, and 14 cases were referred to the Office of Agricultural Law Enforcement for further investigation. Eighty-three educational letters were sent to sellers and their veterinarians in Florida in an effort to inform them of the requirements of Florida statutes governing the sale and health certification requirements of dogs and cats sold in or transported to Florida.

During the 2006-2007 fiscal year, division inspectors visited 287 pet stores to review Official Certificates of Veterinary Inspection and inform sellers about the requirements of the Pet Law for sales of dogs or cats in Florida.

Emergency Management

In the aftermath of Hurricane Andrew in 1992, Chapter 252, F.S. (State Emergency Management Act), was enacted which mandates the development of the Florida Comprehensive Emergency Management Plan. The plan establishes a framework through which Florida prepares for, responds to, recovers from, and mitigates the

impacts of a wide variety of disasters that could adversely affect the health, safety and/or general welfare of the residents of the state. The plan provides guidance to state and local officials on procedures, organization, and responsibilities. It also provides for an integrated and coordinated local, state, and federal response.

To facilitate effective operations, the plan adopts a functional approach that groups the types of assistance to be provided into 18 Emergency Support Functions (ESF). Each ESF is headed by a lead or primary agency or organization, which has been selected based on its authorities, resources, and capabilities in that functional area.

ESF 17, Animals and Agriculture, is organized to ensure a rapid, coordinated response to animal and agricultural needs in the disaster area. The Department is the primary agency for ESF 17. The Division of Animal Industry assigns personnel to staff ESF 17 at the State Emergency Operation Center as well as in the field and provides daily direction. This direction includes the assignment of personnel to handle requests for assistance and ensures that requests for assistance are prioritized, met, and documented.

ESF 17 establishes coordination with other Emergency Support Functions and multiple county, state, and federal agencies and volunteer organizations. It maintains open communications with these agencies and organizations in both the planning and operations stages.

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In order to effectively coordinate the efforts of multiple organizations, a State Agricultural Response Team (SART) was formed in 2003. SART is a multiagency coordination group consisting of governmental and private entities dedicated to all-hazard disaster preparedness, planning, response, and recovery for the animal sectors in Florida.

SART's mission is to empower Floridians through training and resource coordination to enhance all-hazard disaster planning and response for animal and agricultural issues. SART operates under the direction of an advisory board made up of

representatives from supporting agencies and organizations.

Participating agencies supply personnel who comprise the SART Advisory Board. This board currently has over 30 members. It meets quarterly to provide guidance for animal and agricultural emergency management activities. Division of Animal Industry personnel provide support and coordination for these meetings and for the SART Advisory Board.

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SART held its first statewide conference in the spring of 2007 with 225 individuals registered. The conference included discussion on topics ranging from the possibility of pandemic influenza to how to manage stress in the aftermath of a disaster response. The conference fully met the SART objectives to inform, educate, and promote participation in SART activities.

SART brought another long-term goal to the forefront this year with the development of the Veterinary Emergency Treatment Services (VETS) program led by the University of Florida's College of Veterinary Medicine based in Gainesville. VETS can provide veterinary medical care for animals impacted by a disaster. It is similar in concept to the U.S. Army's old-style MASH units. Immediately following a disaster such as a hurricane, a VETS team in cooperation with private, state, and federal agencies would perform needs assessments in an impacted area. The team would assist veterinary hospitals and clinics, coordinate aid for private practitioners, and provide basic to moderate levels of animal care.

VETS is a cooperative effort of the College of Veterinary Medicine, the Florida Department of Agriculture and Consumer Services, and the Florida Veterinary Medical Association (FVMA). VETS

began with grants from the FVMA, the Humane Society of the United States, the American Veterinary Medical Foundation, and PetSmart Charities. The support allowed VETS to purchase two three-quarter-ton, four-door, diesel, crew-cab pickup trucks and equip them for animal emergency services. VETS received in-kind support from Port-A-Vet, Webster Veterinary Supply, and Toshiba. The Florida VETS Project brochure is available at FVMA's web site www.fvma.com.

The development of county State Agricultural Response Teams remains a high SART priority. SART continues to purchase and stage emergency response trailers, supplies, and equipment; provide coordination and guidance on the preparation of multiple training modules and materials; and administer the SART web site and the numerous community outreach activities related to emergency management education.

The Division of Animal Industry, in coordination with the Florida Department of Health and the Florida Fish and Wildlife Conservation Commission, contributed to numerous Avian Influenza (AI) planning meetings as well as two state exercises. Division personnel also participated in local AI exercises.

Division personnel provided presentations at many conferences throughout Florida and in other states. These included the National Hurricane Conference, the South Florida Catastrophic Planning Project, the Governor's Hurricane Conference, the National SART Conference, and the Florida Veterinary Medical Association Conference.

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Division personnel also attended and participated in multiple SEOC exercises, including a statewide hurricane exercise, radiological incident exercise, and a statewide food defense exercise.

Diagnostic Laboratories

Due to Florida's unique geographic location, its close proximity to countries that have endemic diseases that are considered exotic or have been eradicated from the United States, the increase in the number of non-native animal species introduced into the state, and the various international ports located in Florida, the state occupies a critical position in the nation's agricultural picture. Imported animals pose a constant threat for the introduction



of diseases, and the ongoing threat of terrorism raises concerns about the state's vulnerability to deliberately introduced biohazards. To meet these challenges, the Department's Diagnostic Laboratories are staffed with veterinarians and technicians who are highly trained in a range of diagnostic disciplines, including bacteriology, virology, molecular biology, toxicology, parasitology and pathology.

Many diseases are considered harmful to Florida's animal industry or to the general public and are listed as reportable to the Department. In addition to the monitoring and surveillance of animal diseases, the laboratories also provide thousands of tests each year for diseases of public health significance, such as West Nile Virus, Lyme disease, Rocky Mountain spotted fever, chlamydia (psittacosis), toxoplasmosis, giardiasis, salmonellosis, anthrax, leptospirosis, and many others. Rabies suspect animals that have been implicated in human exposure incidents are submitted to the laboratory for collection of samples that are then forwarded to human diagnostic laboratories at the Department of Health for analysis. The laboratory staff work closely with the Bureau of Animal Disease Control staff on disease surveillance programs.

The Diagnostic Laboratories at Kissimmee and Live Oak comprise a laboratory system certified by the American Association of Veterinary Laboratory Diagnosticians (AAVLD) as an all-species, full-service laboratory system. AAVLD certification is recognized worldwide.

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The Bureau of Diagnostic Laboratories received operating capital outlay funds for replacement equipment in the laboratories. Those funds were utilized to upgrade laboratory equipment and purchase biological safety cabinets, microscopes, PCR equipment, laboratory grade refrigerators and other equipment to meet the demands of new tests. The Kissimmee Laboratory underwent an extensive electrical renovation that was needed to meet the new equipment demands and allow for future expansion. Funds were also received to initiate the process for phase two of the new campus master plan. The funding will be utilized to begin construction of a new shipping and receiving building and site work preparation for a proposed new necropsy laboratory suite.

During fiscal year 2006-2007, the Bureau of Diagnostic Laboratories tested over 373,000 submitted samples.

Kissimmee Animal Disease Diagnostic Laboratory

The Kissimmee Animal Disease Diagnostic Laboratory, one of two laboratories in the State of Florida Diagnostic Laboratory System, is a full-service, all-species laboratory receiving domestic and exotic animal species with the exception of primates. A wide variety of tests ranging from full necropsy/anatomical pathology service to clinical pathology, histopathology, and immunohistochemistry are offered. Additional tests include microbiology (bacteriology/virology/serology), toxicology, and molecular diagnostics.

The Florida Animal Disease Diagnostic Laboratories system has a Level 3 Biosafety Laboratory (BSL-3) at the Kissimmee Laboratory facility. This BSL-3 enables the bureau to provide rapid diagnostic

procedures for diseases that are considered foreign in the United States and that could result in an undesired and potentially devastating outbreak due to unintentional introduction of an agent or due to bioterrorism. The USDA designated the Kissimmee Laboratory as part of a pilot system, the National Animal Health Laboratory Network (NAHLN). This initial program identified 12 laboratories across the United States to augment the USDA National Veterinary Services Laboratory in Ames, Iowa, and the USDA Foreign Animal Disease Diagnostic Laboratory at Plum Island, New York. This laboratory network was developed to provide increased homeland and domestic security in Florida and the nation.

The initial target diseases are Exotic Newcastle Disease (END), highly pathogenic Avian Influenza (AI), Classical Swine Fever (CSF), African Swine Fever (ASF), Foot-and-Mouth disease (FMD), Rinderpest, Contagious Bovine Pleuropneumonia (CBPP), Lumpy Skin Disease (LSD), and Vesicular Stomatitis (VS). Laboratory staff has received training on methods using new procedures in molecular diagnostics, including real-time reverse-transcription polymerase chain reaction (rt-RT-PCR). Currently the facility is certified by the USDA to run rt-RT-PCR for AI, END, CSF, and FMD. The laboratory has started surveillance for END, AI and CSF as part of the NAHLN effort to detect foreign animal disease before outbreaks may pose serious problems to agriculture. This is a concerted effort between the Bureau of Animal Disease Control field staff, the Florida Animal Disease Diagnostic Laboratories, and the USDA. Laboratory staff have been actively performing surveillance testing in high-risk bird populations that consist mainly of backyard flocks, exhibition birds,

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and other non-industry-related bird-rearing activities. Additional samples have been received at both Kissimmee and Live Oak for Avian Influenza testing due to increased surveillance by the National Poultry Improvement Program and the Florida Fish and Wildlife Conservation Commission (FWC). The laboratories continue to test for West Nile Virus, a mosquito-borne disease that has continued to be prevalent in Florida. Several tests such as antigen capture ELISA, traditional RT-PCR, rt-RT-PCR, and viral isolation are performed to diagnose the disease. The Kissimmee Diagnostic Laboratory in conjunction with the Florida Department of Health monitors this disease as well as the traditional mosquito-borne diseases (arboviral diseases). Evaluating the spread of arboviral diseases in animals affords public health officials a barometer of impact to humans. New tests have allowed the laboratory to confirm the diagnosis of these diseases.

Live Oak Animal Disease Diagnostic Laboratory

During fiscal year 2006-2007, the Live Oak Animal Disease Diagnostic Laboratory worked to gain infrastructure, training, and testing improvements aimed to better serve Florida's animal industries. These proposed enhancements are intended to position the laboratory to meet changing needs and allow flexible response for future demands. Live Oak Laboratory performs mainly Florida program testing for USDA-regulated program diseases – brucellosis, Equine Infectious Anemia, pseudorabies, Avian Influenza, Avian Mycoplasmas, Pullorum Typhoid, and Johne's disease. During this fiscal year, Live Oak Laboratory tested 323,068 samples. Results for many of these tests were reported to officials responsible for emergency eradication efforts or ongoing animal disease control programs. These were primarily for cattle, horses, poultry, and swine.

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Poultry disease surveillance for the area broiler industry is a major component of sample submission, and testing is regularly conducted at Live Oak Laboratory to monitor birds for Salmonella, Avian Influenza, and other disease entities critical to poultry production and economics. Ongoing regular submissions of diseased backyard poultry via Bureau of Animal Disease Control field operations yields surveillance samples that could provide early detection of diseases that could be very detrimental to Florida's poultry industries.

The laboratory staff worked closely with Bureau of Animal Disease Control field staff and District veterinarians on numerous individual cases as well as several ongoing disease programs to assist in the early detection of monitored diseases and to provide surveillance for the emergence of new animal disease threats.

Feed, Seed and Fertilizer

Feed Program

Animal feeds are regulated using a network of six Department-certified laboratories located throughout the United States. Registrants – including ingredient suppliers, livestock feed and pet food manufacturers, and other distributors of commercial feed products – are required to submit samples of their products for testing based on the feed type and tonnage distributed in the state. Results from the certified laboratories are reported to the State Feed Laboratory, where compliance with Chapter 580, F.S., is determined and regulatory actions are initiated as appropriate. In fiscal year 2006-2007, 637 companies were registered with the Depart-

ment as distributors of commercial feed in Florida. A total of 2,147 samples were submitted and analyzed, with 38 violations in one or more categories. This represents an overall violation rate of 1.77 percent. Inspection, sampling, and laboratory evaluation oversight was conducted to verify compliance with the feed program. Seventeen consumer complaints were investigated, and 34 administrative fines totaling \$23,285 were collected for feed rule violations.

Bovine Spongiform Encephalopathy (BSE), widely referred to as “mad cow disease,” continues to be the most critical feed-related issue. BSE is a progressive and fatal neurological disorder of cattle that is caused by infectious protein agents called prions. The disease was first identified in 1986 in the United Kingdom, but it was not detected in the United States until December 2003, when BSE was diagnosed in a single dairy cow in Washington State (the cow had been imported from Canada). Subsequently, two additional cows, one in Texas and another in Alabama, were confirmed to have BSE in 2005 and 2006. In each case, swift government intervention prevented the infected cattle from entering the animal feed or human food markets.

Variant Creutzfeld-Jakob Disease, a chronic and fatal neurodegenerative disease that affects humans, is assumed to be linked to the consumption of beef products contaminated with the BSE agent. The U.S. Department of Health and Human Services and the U.S. Department of Agriculture have implemented measures to protect the public from health risks associated with BSE and to prevent the spread of the disease in U.S. cattle. The Department continues to pursue funding from additional sources to enhance existing surveillance and laboratory analysis programs related to BSE prevention.

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To ensure that this disease does not develop in Florida, the Bureau of Compliance Monitoring extended its contract with the U.S. Food and Drug Administration (FDA) to conduct inspections of feed manufacturers, distributors, transporters, salvagers, and ruminant feeders. The inspections are intended to prevent the establishment and amplification of BSE by ensuring that no prohibited mammalian protein products are used in feed for ruminant animals such as cows and sheep. A total of 328 BSE inspections were completed under the 2006 contract agreement, and 330 inspections are contracted for the 2007-2008 fiscal year. In August 2006, the Feed Section secured additional funds to enhance its feed analysis and inspection program where animal feeds are tested for materials prohibited by FDA's ruminant feed ban using polymerase chain reaction (PCR). This new technology uses a DNA amplification technique to isolate and amplify any bovine proteins present and potentially prohibited from use in sampled feed products. In the 2006-2007 fiscal year, 339 animal feeds were tested for the presence of bovine proteins using PCR.

Seed Program

The seed program is administered to ensure that Florida consumers have a source of high-quality seed for planting that meets or exceeds state and federal standards. Samples of agricultural, vegetable, and flower seed are collected and analyzed for purity, germination, and compliance with Chapter 578, F.S. Commercial seed samples are tested on a fee basis to determine seed quality for accurate labeling information. During fiscal year 2006-2007, 2,608 Seed Dealer Licenses were issued and 3,096 official seed samples were collected. Laboratory personnel analyzed 3,106 official, special, and commercial seed samples, requiring 53,191 determinations. Based on analyses, it was determined that

19.1 percent of the official samples were mislabeled and 3.7 percent were illegal.

The increased usage of genetically enhanced seed in Florida agriculture – predominantly corn, cotton, and soybean seed – is confirmed through the division's seed sampling and regulatory program. Samples of genetically enhanced seed may be subjected to additional analyses to ensure accurate labeling and protect Florida growers and consumers.

The Seed Investigation and Conciliation Council serves to assist farmers and seed dealers in determining the validity of complaints made by farmers against seed dealers and to recommend cost damages in those cases involving failure of the seed to produce as represented by the label on the seed package. This council received four new complaints this year, two of which are currently pending.

The division continues to play a vital role in controlling the spread of the invasive noxious weed tropical soda apple. During this fiscal year, the seed laboratory identified 24 seed lots contaminated with this prohibited noxious weed seed. The result was the stop-sale of 172,300 pounds of agricultural seed destined for planting in Florida and the Southeast. The Department continues to inform stakeholders about the severity of tropical soda apple and educate them about how to control it. An additional 64,700 pounds of agricultural seed were removed from sale due to laboratory analysis confirming the presence of other noxious weed seed, including Texas millet and wild radish. Laboratory analysis resulted in the stop-sale of over 59,000 pounds of agricultural and vegetable seed due to germination below the minimum standard allowed under 5E-4.006, Florida Administrative Code.

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Fertilizer Program

The fertilizer program stands out as one of the most modern programs in the country. Official samples of commercial fertilizer and agricultural liming materials are collected by field staff throughout the state and analyzed to ensure they meet the standards established in Chapter 576, F.S. The Department's Fertilizer Laboratory continually searches for, or develops, new methodologies to meet the evolving needs of the Florida consumer in the areas of nutrient availability in controlled-release fertilizers and micro-nutrient solubility.

At the direction of former Governor Bush, the South Florida Water Management District and the Florida Department of Environmental Protection developed the Lake Okeechobee and Estuary Recovery Plan. In conjunction with this plan, the Department was tasked with revising the nutrient content standards for fertilizers use in urban settings. Through rule making, the Department has proposed labeling changes for fertilizer products intended for homeowner lawns, sports turf, and urban turf. Once enacted, these changes will protect Florida's water quality by limiting the application of soluble nitrogen and available phosphate for lawns and turf.

Issues such as non-nutritive or heavy metals in fertilizers and nutrient BMPs at fertilizer plants are also administered under this program. The Fertilizer Material Assessment Advisory Group scientifically evaluates all new fertilizer materials before they are permitted into the Florida marketplace and used in Florida's delicate environment. No new materials were reviewed by this group during the fiscal year. The Fertilizer Laboratory also analyzes commercial samples on a fee basis to determine compliance with label guarantees. There were 6,478 fertilizer samples analyzed during the fiscal year,

of which 1,750 were found to be deficient in one or more plant nutrients. The laboratory performed 224,372 determinations on these samples. The overall deficiency rate was 27 percent. Because of excessive deficiencies, licensees were placed on probation, and penalties and fines totaling \$625,359 were levied, with \$524,053 of that total returned to consumers. There were 510 licenses issued for the sale of fertilizer in Florida. Additionally, 1,629 brands and grades of specialty fertilizers were approved for distribution. Nearly 1.5 million tons of mixed fertilizer and fertilizer materials were reported sold in the state.

The fertilizer laboratory also performed 8,838 analyses for non-guaranteed trace metals in 283 fertilizer products. Four samples exceeded the established tolerances for arsenic and lead. A total of 489 environmental water samples were analyzed for nutrient content for other divisions in the Department. There were 4,515 determinations performed on these samples.

Agricultural Water Policy

Best Management Practices

The Department, through the assistance of the Office of Agricultural Water Policy (OAWP), has produced a number of Best Management Practices (BMPs) for water conservation and water quality. BMPs are practices or combinations of practices based on research, field-testing, and expert review, determined to be the most effective and practicable on-location means, including economic and technological considerations, for improving water quality in agricultural and urban discharges. The process of

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developing BMPs includes the agricultural industry, Florida Department of Environmental Protection, water management districts, and environmental community stakeholders, with assistance from OAWP staff.

Implementation of BMPs adopted by Department rule and verified effective by the Florida Department of Environmental Protection (DEP) affords producers a presumption of compliance with state water quality standards for the target pollutants. BMP implementation also makes producers eligible to receive cost share assistance, as available. OAWP staff and OAWP-funded implementation teams work throughout the state to assist producers in selecting and implementing the BMPs applicable to their operations. Approximately 2,600 agricultural producers representing almost 2 million acres of agricultural land are participating in OAWP BMP programs.

During fiscal year 2006-2007, OAWP adopted a BMP manual by rule for container nurseries statewide, finalized a manual for sod farms (soon to be

adopted), and is drafting manuals for cow-calf and equine operations. Staff has also been working with DEP to conduct BMP effectiveness verification projects to evaluate the extent to which selected BMPs protect water quality.

State and Federal Cost-Share Programs

In order to assist agricultural producers in implementing BMPs, OAWP has developed working partnerships with various state and federal agencies. Through these partnerships, cost-share reimbursement is available for growers to implement BMPs that are otherwise cost-prohibitive. Currently, the OAWP has active agreements with USDA-NRCS, St. Johns River Water Management District, Suwannee River Water Management District, Southwest Florida Water Management District, South Florida Water Management District, several of the state's Soil and Water Conservation Districts, and most of the state's Resource Conservation and Development Councils in order to administer these cost-share programs. During this year, staff worked to expand BMP cost-share programs to nursery and vegetable areas in South Florida.



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BMP Implementation Follow-up (Quality Assurance)

This year OAWP initiated the development of a Quality Assurance process to track the implementation of BMPs throughout the state. The OAWP had already instituted BMP tracking in the Suwannee River Basin and the Lake Okeechobee Watershed. The overall purpose of the statewide program is to collect information on producer implementation of BMPs identified on Notices of Intent (NOIs) submitted to the Department under various BMP rules. Through surveys and site visits, the quality assurance program will:

- Provide information on the level of producer compliance with BMPs;
- Help identify needs for additional education and implementation assistance;
- Communicate the importance of BMP implementation to producers; and
- Help measure the success of the Department's BMP programs.

A survey, given to all producers who have submitted NOIs, will be the key feedback mechanism. Strategic site inspections will support the survey process, and allow OAWP staff or contractors to observe practices, check records, gather additional information on education/assistance needs, and stay in touch with growers and their circumstances. The first quality assurance survey and site inspections will commence in September 2007, and will be directed toward growers who have submitted NOIs to implement the Ridge Citrus BMP. Other commodities and areas of the state will be covered on a staggered schedule.

Field Staff and Technical Services

OAWP has field staff co-located with the five Water Management District offices throughout the state. They help growers with BMP implementation by providing assistance with state and federal programs, conservation planning, and cost-share application information, among other things. Field staff play a vital role in ensuring that BMPs are implemented as designed, and help conduct follow up inspections on grower fields. During this year, field staff have assumed more management oversight of OAWP contracts that support BMP development and cost-share. Field staff also have participated in DEP's total maximum daily load (TMDL) program during the establishment of TMDLs and the development of Basin Management Action Plans (BMAPs) to implement TMDLs. OAWP's role in the BMAP process is to ensure that agriculture is adequately represented, and that agricultural impacts to water quality are appropriately addressed.

Regional Partnerships

The Suwannee River Partnership: The Suwannee River Partnership was formed in 1999 as a coalition of state, federal, and regional agencies, local governments, and private industry representatives working together to reduce nitrate levels in the surface waters and groundwater within the Suwannee River Water Management District. Initially, the partnership's efforts were limited to the Middle Suwannee River Basin. In 2003, the partnership expanded its work to include the Santa Fe River Basin. The partnership continues to assist dairy, poultry, and row crop farmers with BMPs and conservation plans. This year, staff worked with affected agencies and interests to develop a rule and memorandum of understanding to establish an Environmental Stewardship Certification Program,

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using the Suwannee River as basin one of the pilot program areas.

The Northern Everglades and Estuaries Protection Program: The Lake Okeechobee Protection Program was established by the 2000 Legislature to restore and protect the lake. Staff worked with DEP and SFWMD to implement the Lake Okeechobee Protection Plan that was submitted to the Legislature in 2004. The recommendations included in the plan are designed to reduce phosphorus loads from agricultural operations and implement long-term solutions based on the lake's phosphorus total maximum daily load. In 2007, the Legislature expanded the scope to include the St. Lucie and Caloosahatchee River watersheds. OAWP will continue to work closely with DEP, SFWMD, and other stakeholders in this new area to ensure that its programs address legislative resource protection goals and directives.

Soil and Water Conservation Council

The Soil and Water Conservation Council is a soil and water issues advisory body to the Commissioner of Agriculture. In addition to key agricultural producers, the council now includes representatives from the five Water Management Districts, DEP,

the University of Florida's Institute of Food and Agricultural Sciences, USDA-NRCS, the Florida Legislature, and the environmental community. The council's primary purpose is to make water policy recommendations to the Commissioner of Agriculture and to assist the Department with oversight of its key water resources programs. This year, the council addressed key issues such as exotic and invasive species, equitable consumptive use permitting, the bio-fuels program, and expanding the use of controlled-release fertilizers as an element of water resource protection.

Mobile Irrigation Laboratories

For more than a decade, partnership-based mobile irrigation labs (MILs) have been operating throughout Florida. Presently, there are 23 MILs providing service in 56 counties. Of the 23 MILs, 10 are agricultural and 13 are urban. Recognizing the invaluable service that MILs provide to the state's agricultural industry, OAWP continues to administer cost-share through MILs (via partnerships with state and federal agencies), improve MIL services and programs throughout the state, and document related activities and water savings.

The MILs provide on-site water conservation assistance to the agricultural industry and the general public, under the coordination and administration of OAWP staff, the Water Management Districts, and/or the USDA/NRCS. This assistance typically includes site-specific irrigation system testing, diagnostics, irrigation scheduling, and/or recommendations for system upgrades or retrofits, consistent with the Department's BMP implementation and federal conservation planning programs. During this fiscal year, the Department received continued funding from the Florida Legislature to support the statewide MIL water conservation effort.

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If fully implemented, the evaluation recommendations from these 23 MILs for fiscal year 2006-2007 would save a minimum of 3.08 billion gallons of water a year throughout the state. Of that amount, 2.8 billion gallons were attributed to the 10 agricultural MILs. The cost to conserve water through MIL services is very competitive when compared to the costs to develop new sources of water.

Florida's Agricultural Water Policy

Staff continues to work to implement the nine key policies enumerated in Commissioner Bronson's "Florida's Agricultural Water Policy" document, which was released in July 2003. This document was prepared using the knowledge and experience of nearly 100 leaders in the agricultural, environmental, urban, and regulatory fields. The document resides on OAWP's web site, www.FloridaAgWaterPolicy.com, and outlines statewide agricultural issues associated with the supply, use, conservation, and allocation of the state's limited freshwater resources.

Ombudsman Assistance

OAWP staff provide third-party arbitration for growers unduly affected by regulations. Staff produces written reports based on scientific details and expert technical opinion in order to help the regulatory agency determine whether an agricultural activity meets statutory requirements for exemption from permitting. During this fiscal year, OAWP executed a memorandum of agreement with all five Water Management Districts, which describes the process through which OAWP will assist in these determinations.

Agricultural Law Enforcement

The Office of Agricultural Law Enforcement consists of the Bureau of Uniform Services, the Bureau of Investigative Services, and the Bureau of Administrative Services, dedicated to the protection of Florida's agriculture and food supply. The office supports all regulatory and law enforcement programs of the Department and engages in cooperative partnerships with many federal, state, and local law enforcement agencies throughout the state. It works to safeguard the agricultural industry from the introduction of devastating diseases and pests, to



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secure the state's borders, and to enforce criminal and civil violations occurring within state forests, criminal acts against consumers, and those crimes involving agriculture, horticulture, and aquaculture.

The Florida Contraband Forfeiture Act authorizes the Office of Agricultural Law Enforcement to seize and forfeit real and personal property, including currency, vehicles, aircraft, and other articles that are used in violation of the act. In addition, the office conducts joint law enforcement ventures with federal agencies that result in the seizure of cash and property.

This past fiscal year, the Office of Agricultural Law Enforcement achieved accreditation status by bringing all of its operations into compliance with accepted best practices of the law enforcement

community through standards set by the Commission for Florida Law Enforcement Accreditation, Inc.

Bureau of Uniform Services

The Office of Agricultural Law Enforcement's interdiction stations are Florida's first line of defense in the protection of its agriculture. The Department operates 22 agricultural inspection stations located on all paved highways crossing the natural boundary of the Suwannee and St. Marys rivers. In addition, the Department operates a 23rd inspection station, which is located on Interstate 10 at the Florida/Alabama line. Agricultural vehicle inspections are conducted at each location around the clock, 365 days a year, by 224 law enforcement personnel and a support staff of five individuals.

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These officers support and supplement all of the Department's regulatory and law enforcement programs by conducting inspections of highway shipments of agricultural, horticultural, aquacultural, and livestock commodities. These regulations and programs ensure compliance with federal-state marketing agreements as well as laws, rules, and regulations enacted to make certain the public receives quality food products. Programs are also designed to prevent, control, and eradicate specific plant and animal pests and diseases that could economically devastate segments of Florida's agricultural industry.

The state's border security is one of the four cornerstones in Florida's domestic security initiative. The increased vigilance of the Department's law enforcement officers has strengthened Florida's surface border protection. The implementation of the plan has resulted in the following:

- Performing interdictions/inspections of all commercial traffic and rental trucks entering and exiting the state.
- Tracking vehicles transporting dangerous cargo entering all interdiction stations.
- Utilizing real-time imaging of documents to track movement of agricultural commodities and live stock entering and exiting the state of Florida.
- Utilizing mobile gamma ray technology to enhance detection of plants, pests, and animal diseases, and safeguarding Florida against agri-terrorism and contraband smuggling.

- Utilizing canine (K-9) teams, specially trained to detect illegal plant and animal material; these specially trained dogs detect animal and plant materials that may harbor infectious diseases that could be harmful to Florida's farming community and to public health.
- Maintaining a 24-hour, toll-free hotline to report suspicious inbound or outbound commercial vehicles, as well as other agri-terrorism issues.
- Increasing staffing at all interdiction stations post September 11, 2001, has resulted in the identification of over 536 illegal aliens who attempted entry through concealed means. It has also resulted in the recovery of \$25 million in contraband, including narcotics, currency, and stolen property.
- Implementation of a camera system at key locations with tag recognition software that enhances bureau personnel's ability to detect suspect carriers.

To facilitate movement of commercial highway traffic, the Office of Agricultural Law Enforcement continues a public/private partnership with the Florida Department of Transportation and private enterprise, to provide commercial carriers with the PrePass™ electronic identifier which may allow some vehicles to bypass interdiction stations, reducing station traffic and allowing Department officers to concentrate their efforts on specific carriers of agricultural, horticultural, aquacultural, and livestock commodities.

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During fiscal year 2006-2007, Department officers conducted 12,014,400 vehicle inspections, detecting 8,356 violations. The violations resulted in 292 arrests, 5,482 warnings, 2,514 administrative actions, and the apprehension of 68 illegal aliens. Officers also seized illegal narcotics currency and recovered stolen property valued at \$3.8 million.

During times of natural disasters, bureau officers function as members of Florida's Mutual Aid Response Team, participating in relief efforts to ensure that devastated areas receive adequate law enforcement protection.

The Department also cooperates with federal, state, and local governmental agencies on projects, both criminal and non-criminal, which either improve the efficiency of agricultural programs or generate additional revenues to the state without increasing costs to Florida's citizens.

Department officers collected and provided the Florida Department of Revenue with 72,268 bills of lading pertaining to certain types of cargo entering Florida. These efforts resulted in an additional \$8,285,198 in sales and use taxes being collected by the state during fiscal year 2006-2007 that would have otherwise gone uncollected. This cooperative effort not only greatly enhances the state's ability to collect sales and use taxes but also precludes out-of-state contractors and businesses from gaining an unfair competitive advantage over Florida entrepreneurs. Since the inception of the program in April 1993, this cooperative effort has resulted in the detection and collection of over \$150 million in otherwise undetected sales and use tax.

Bureau of Investigative Services

The Bureau of Investigative Services provides investigative and technical support to the Bureau of Uniform Services and Bureau of Administrative Services in daily operations.

The bureau provides investigative support for all divisions of the Department in both civil and criminal matters over which the Department has jurisdiction.

The bureau works closely with all local, state, and federal agencies, providing investigative assistance and support in all matters over which the Department has jurisdiction, and is directly involved in safeguarding the public in issues relating to homeland security.

Bureau Mission

The mission of the Bureau of Investigative Services is to provide a safe and secure environment for the citizens of this state by: protecting consumers against unfair and deceptive trade practices; protecting the state's diverse agricultural industry from theft and other related crimes; preserving and safeguarding the wholesomeness of food and other consumer products; and protecting the state's natural resources.

To safeguard the public, the bureau aggressively investigates criminal complaints seeking appropriate judicial intervention to resolve the complaint and prevent future acts of wrongdoing.

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Bureau Responsibilities

The responsibilities of the Bureau of Investigative Services are as follows:

- The investigation of matters over which the Department has jurisdiction and incidents occurring on property owned, managed, or controlled by the Department of Agriculture and Consumer Services.
- The enforcement of criminal and civil violations occurring within state forests or any crimes involving agriculture such as farms or farm equipment, animals, livestock, poultry, and any crimes involving horticulture, aquaculture, or citrus products.
- The enforcement of environmental crimes such as illegal dumping, and laws governing outdoor open burning. All personnel in the bureau are trained in fire and arson investigations and investigate fires occurring in wildlands and urban areas.
- The enforcement of laws governing consumer issues including illegal telemarketing operations, sale of business opportunities, solicitations of contributions, sellers of travel, motor vehicle repair fraud, health studios, dance studios, pawnshops, and moving and storage companies, and price-gouging.
- Developing and processing criminal intelligence information, conducting crime analysis of reported crimes, conducting research of persons suspected of committing crimes, and conducting background investigations on prospective employees of the Department.

- Providing personal protection services for the Commissioner of Agriculture and other dignitaries as needed.

Domestic Security

The Bureau of Investigative Services is actively involved in issues relating to domestic security and participates in all seven regional domestic security task forces statewide.

The bureau has two positions assigned to the state's joint response team under the direction of the Department of Environmental Protection. The team, which is represented by several state agencies, is trained in the response to and investigation of biohazard incidents statewide.

The bureau continues to conduct threat assessments of regulated entities affiliated with fertilizer, pesticide, food, and petroleum production and distribution points. It also investigates theft, shrinkage, and suspicious activities regarding these materials.

In addition to these duties, the bureau is engaged in a cooperative partnership with all federal, state, and local agencies in all 67 counties, providing investigative support in all matters over which the Department has jurisdiction.

Personnel and Staffing

The Bureau of Investigative Services currently has a staff of 55 personnel. This includes 52 sworn officers, two full-time civilian positions, and one part-time civilian position. The bureau currently has 18 field offices throughout the state for investigations. In addition, each CARL Officer has an office provided by the Division of Forestry on or near the officer's assigned area.

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Bureau Performance Measures

Each year the bureau is given a set standard by which the overall performance of the bureau is measured. The established performance measure for the bureau is based on the number of investigations initiated and the number of investigations closed.

During fiscal year 2006-2007, the approved standard for the bureau was 1,995 investigations initiated, with a closure rate of 80 percent. During this reporting period, the bureau initiated a total of 2,548 investigations, with a closure rate of 99 percent. The number of investigations initiated includes investigations conducted by CARL officers on state lands.

During fiscal year 2005-2006, the bureau initiated 2,336 cases, including CARL cases, with a closure rate of 86.1 percent. In comparison with the number of investigations initiated in fiscal year 2006-2007, the bureau saw an 8.24 percent increase in the number of cases initiated this reporting period. The higher number of investigations initiated is primarily due to the statewide fire emergency. The bureau is responsible for the investigation of wild-fires deemed arson, of suspicious origin, or where the violator is known.

The high closure rate for this fiscal year is due to normal case closures during the reporting period, as well as ongoing investigations that carried over from the previous years being closed during the current year.

The following chart depicts an overall summary of the general categories used to classify investigations and the number of investigations conducted

in each category by the bureau during fiscal year 2006-2007. General categories may have sub-categories associated with them.

Animal/Livestock	61
Aquaculture	15
Arrest on Warrant	0
Background/Pre-employ	65
Bomb Threat/Destructive Device	0
Burglary/Trespass	5
Bypassing Ag Inspection Station	0
Consumer Related	122
Dignitary/Protective Operations	21
Drugs/Alcohol	25
Entomology/Pest Control	33
Environmental	5
Executive Investigations	2
Field Interview	1
Fire Related	1,028
Food Safety	7
Fruit and Vegetable	1
Illegal Aliens	2
Informational Only	5
L.E. Sensitive/Intel.	6
Licensing Related	6
Persons	4
Plant Related	6
Special Details	3
Standards Related	17
State Lands Related	1,013
Theft	37
Traffic	43
Other	5
Total Cases Initiated	2,548

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Arrests/Notices to Appear/Civil Violations/ Written Warnings – Field Interrogation Reports

The following is a cumulative total of actions taken involving known violators:

Felony Charges Filed (Adult and Juvenile):	102
Misdemeanor Charges/Notices to Appear:	265
Total Criminal Charges Filed:	367
Administrative/Civil Violations:	352
Written Warnings/Field Interrogation Reports:	495
Total Number of Actions Taken Involving Known Subjects:	1,214

Restitution/Recovery

During this reporting period the bureau was directly involved in the investigation of or assisted in the investigation of significant drug seizures, recovery of stolen property, and the payment of restitution to the Department for expenses and investigative costs.

The cumulative total for interdiction/restitution/recovery:	\$2,542,664
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General Investigative Categories

Agricultural Environmental Services

This category includes entomology and pest control, feed, seed, and fertilizers.

The Bureau of Investigative Services currently has one full-time investigator assigned to the Division of Agricultural Environmental Services (AES). The investigator works AES-related issues on a state-wide basis and has been very successful in the

investigation and completion of both criminal and administrative complaints.

During fiscal year 2006-2007, there were 33 investigations initiated relating to entomology and pest control, most of which pertained to pesticides and persons engaged in unlicensed pest control.

Animal Industry

During the reporting period, the bureau initiated 61 investigations relating to animal industry issues, some of which crossed over to other divisions. The agency was able to recover 36 stolen animals valued at \$45,000, and successfully prosecuted suspects resulting in \$46,300 in court-ordered restitution relating to four separate cattle theft cases.

Aquaculture-Related Issues

Despite two special events and the state of emergency relating to fires, a total of 1,243 hours was devoted specifically to the aquaculture program, which resulted in a total of 10,565 patrol miles statewide. During fiscal year 2006-2007, 146 food safety inspections and 434 compliance inspections were conducted and 15 investigations relating to aquaculture issues were initiated.

Consumer Protection

This category includes illegal telemarketing operations, sale of business opportunities, solicitations of contributions, sellers of travel, motor vehicle repair fraud, health studios, dance studios, pawnshops, and moving and storage companies.

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The Bureau of Investigative Services enjoys a close working relationship with the Division of Consumer Services, and conducts joint investigations of matters of mutual concern. The bureau and the division have established an intake system for consumer complaint referrals to aid in tracking complaints and investigations.

The following chart depicts a summation of consumer-related cases initiated by the bureau in this reporting period:

Business Opportunities	6
Credit Card Skimming	4
Dance Studios	0
Game Promotion	3
Health Studios	0
Identity Theft	3
Motor Vehicle Repair	14
Moving and Storage	7
Non-Regulated	1
Organized Fraud	6
Pawn Shops	2
Price-Gouging	8
Racketeering/RICO	3
Regulatory Inspection	1
Sellers of Travel	6
Solicitation Contributions	7
Telemarketing	51
Total Cases Initiated	122

The Bureau of Investigative Services also reviews all incoming complaints received by the Division of Consumer Services relating to motor vehicle repairs for early detection of potential criminal activity, and databases the information for historical reference. During the fiscal year, the bureau reviewed and processed 1,386 motor vehicle repair complaints.

Fire Related

The bureau investigates outdoor open burning and wildland fires primarily associated with careless or reckless acts and arson. Other illegal fires are investigated such as burning without authorizations and issues relating to safety regulations.

Fiscal year 2006-2007 experienced drought conditions resulting in increased fire activity. The bureau investigated 1,028 fire-related incidents for cause and origin, which resulted in a total of 124 arrests. Thirteen adults and 11 juveniles were charged with arson/intentional-type fires, and 75 adults and 25 juveniles were charged with misdemeanor offenses related to careless or reckless-type acts and non-compliance with regulations.

The following chart outlines the categories of fires investigated:

Arson/Structure or Conveyance	19
Campfire	20
Children (Under 12)	7
Controlled/Certified Burn	11
Debris Burning	193
Equipment	35
Incendiary	88
Incendiary (Juvenile)	40
Lightning	126
Miscellaneous	38
Railroad	3
Smoking	33
Undetermined	290
Unlawful Burning (Non-Compliance)	125
Total Cases Initiated	1,028

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The Bureau of Investigative Services provides law enforcement services on lands owned, controlled, or managed by the Department throughout Florida. The Division of Forestry currently manages over 1 million acres of property.

The bureau strives to reduce criminal activity on state lands by a proactive patrol presence, seeking voluntary compliance in the enforcement of the laws and rules designed to protect the environment. The bureau currently has 13 uniformed officers assigned full time to patrol specific state forest properties. The bureau also assigns investigative personnel who patrol state lands on a regular basis.

During fiscal year 2006-2007, the bureau initiated 1,013 investigations related to state lands. CARL officers and investigators issued 352 notices to appear to individuals for violation of rules governing state lands. In addition, CARL officers issued 359 written warnings for violations.

In addition to their normal duties, CARL officers were required to respond to fires during the state of emergency, assist with special details such as the state fair and domestic marijuana eradication, and to assist in other operations due to heavy case loads and shortage of personnel. CARL officers were responsible for 11 felony charges, including three for incendiary fires, and 130 misdemeanor charges, including 26 for fire/burning violations.

These extra duties resulted in CARL officers working 15,563 hours outside of their normal duty assignments, and traveling 44,713 miles. Most of the additional time and mileage is associated with fire responses and investigations.

During the reporting period, the bureau devoted a total of 12,753 hours to patrolling state lands, travel-

ing a total of 171,181 miles. CARL officers accounted for 10,849 hours and 136,591 miles patrolled.

Domestic Marijuana Eradication

During fiscal year 2006-2007, the bureau assisted the Bureau of Administrative Services in providing orientation and training opportunities to all law enforcement agencies throughout the state regarding information submission, reimbursement procedures, and investigative and detection techniques.

Domestic Security Programs

As stated previously, the bureau actively participates in all seven regional domestic security task forces and planned events. Planned events include training such as the National Incident Management System and mock incidents or disasters.

The bureau continues to play an integral part in the updating of information relating to aerial applicators operating in the state. This information is shared with our state and federal partners in issues relating to domestic security.

The Office of Agricultural Law Enforcement works with the Department's Office of Agricultural Emergency Preparedness in developing and implementing the agricultural committee in the Miami region. The establishment of this special committee appears to be a prelude to establishing agricultural committees in all seven regions and on the state working group.

Supporting Florida Agriculture

The Chief of the Bureau of Investigative Services is the designated agency representative for the state-wide prevention committee, which addresses issues relating to prevention, information sharing, and intelligence. The Office of Agricultural Law Enforcement continues to receive special funding through this committee and through the Law Enforcement Terrorism Prevention Program funds, which helps to augment operational maintenance costs of the four VACIS vehicles operated by the Bureau of Uniform Services; has helped to acquire and maintain special electronic surveillance equipment utilized at select interdiction stations; and helps enhance the capabilities of both bureaus in supporting the Homeland Security Initiative.

Officer of the Year

Investigator Karen Black was the recipient of the Office of Agricultural Law Enforcement's Officer of the Year Award for outstanding work performance and accomplishments. Investigator Black is exceptional in her abilities to investigate crimes and, by virtue of her assignments, has become somewhat of an expert in credit card skimming devices used at fuel stations to steal numbers for identity theft. Investigator Black was requested to be a guest lecturer this past year at the annual State Attorneys conference on the topic.

Bureau of Administrative Services

The Bureau of Administrative Services is designed to provide organizational support to the sworn and civilian personnel of the Office of Agricultural Law Enforcement. The bureau manages personnel, finances, records, property and evidence, supplies, the vehicle fleet, Department property, data

services, computer support, training, hiring, and accreditation.

State Accreditation

On June 6, 2007, Commissioner Bronson announced that the Office of Agricultural Law Enforcement had been awarded accredited status by the Commission for Florida Law Enforcement Accreditation (CFA) at a commission meeting in Stuart. CFA is based in Orlando and reviews all aspects of an agency's policies and procedures, management, operations, and support services to determine compliance with 276 recognized standards of excellence.

Training

The bureau's Training Section coordinates and delivers law enforcement and civilian training to all personnel, as well as other law enforcement agencies. The Training Section delivered over 6,200 contact training hours to sworn personnel and coordinated over 2,000 additional training hours utilizing outside training facilities. In addition to legal and ethics training, officers received training in high-liability areas such as firearms, defensive tactics, and use of force. Officers also received training on regulatory inspections, legal updates, nuclear material transportation, and contraband interdiction.

The Training Section partnered with the Federal Law Enforcement Training Center (FLETC) located in Glynco, Georgia, during the annual in-service training held at the Pat Thomas Law Enforcement Academy. During this course officers received training on Commercial Carrier Counter-terrorism. This course is designed to equip officers with the tools necessary to handle the increased threat in the homeland security environment.

Supporting Florida Agriculture

Domestic Marijuana Eradication Program

In January 2005, the Office of Agricultural Law Enforcement became the pass-through agency for the Outdoor Marijuana Eradication Program through the U.S. Drug Enforcement Administration. Reimbursement funds are paid to participating agencies for plants pulled.

During fiscal year 2006-2007, the Bureau of Administrative Services assisted the Bureau of Investigative Services in coordinating and completing eradication sweeps throughout the state. In the sweeps, local agencies are designated as the lead agency, and the bureau provides assistance to help plan and carry out operations, including providing personnel to assist in the actual eradication effort. These operations normally operate for an entire week at a time.

The following chart outlines a brief synopsis of accomplishments for calendar year 2006:

Plots Eradicated	308
Cultivated Plants Eradicated	10,354
Bulk/Processed Marijuana Seized (pounds)	33
Total Arrests/Charges Filed	14
Firearms Seized	41
Total Assets Seized	\$380,310

In comparison, the following chart outlines the accomplishments of the first six months of calendar year 2007:

Plots Eradicated	68
Cultivated Plants Eradicated	1,828
Bulk/Processed Marijuana Seized (pounds)	177.52
Total Arrests/Charges Filed	41
Firearms Seized	11
Total Assets Seized	\$122,371

Information Technology

Agricultural Law Enforcement Information Technology supports several proprietary applications within the Bureau of Uniform Services. The Bill of Lading (BOL) and Commerce Transport Imaging System (CTIS) programs are installed at all 23 Inspection Station locations. Thanks to the CTIS program, Florida is the only state in the nation which is able to track incoming and outgoing shipments of agricultural commodities, livestock, and plant material, with information on both the origination and destination locations. The Bill of Lading is a joint interagency program which has imaged an average of over 97,000 documents each year for the past seven years and transmits that information to the Florida Department of Revenue for use tax collections.

The new Tag Recognition System was installed and is now functioning at all interstate locations and five side stations. This system documents every vehicle which passes through these stations, providing a rapid verification of the time, date, and identity of every driver and vehicle that enters the stations. It also images tags and sends queries to Florida Crime Information Center (FCIC) and the National Crime Information Center (NCIC), for possible criminal activity such as stolen vehicles, etc.

In addition, Information Technology is responsible for the upkeep and maintenance of the Department's Emergency Operations Center. This site, located in the Rhodes Building in Tallahassee, includes redundant systems for communications, video feeds, and video conferencing. It can also be used as a backup location to the State Emergency Operations Center.

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Property and Evidence

The Property and Evidence Administrator serves three primary functions: conducting the annual Department inventory, providing uniforms to officers, and managing evidence. The Department inventory is conducted yearly and involves traveling throughout the state to verify the locations of all Agricultural Law Enforcement inventory items. The administrator also supplies approximately 250 officers with the uniforms and gear needed for their daily activities. In addition, the Property and Evidence Administrator manages the Rhodes Building Evidence Room and five other evidence rooms in the state, assuring that evidence is collected and stored within the guidelines and rules set forth in Florida Statutes and the Department's policy.

Records Management

The Records Section is responsible for maintaining all records created by the Department. This includes all documents, papers, emails, maps, books, tapes, photographs, films, audio recordings, data processing software, video and audio equipment for public viewing or listening, and other material regardless of physical form or characteristics that are made or received pursuant to law or ordinance, that is in connection with the transaction of official daily business by the Department. All records are stored in accordance with state guidelines. The Records Analyst is currently in the process of implementing a new software program and scanning system.

Plant Protection, Inspection and Certification

The Department's Division of Plant Industry is the plant protection arm of the Department that works to detect, intercept, and control plant and honey bee pests and diseases that threaten Florida's native plant and agricultural resources. The division maintains these functions through five bureaus:

- Pest Eradication and Control
- Citrus Budwood Registration
- Methods Development and Biological Control
- Plant and Apiary Inspection
- Entomology, Nematology and Plant Pathology

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This fiscal year the division encountered new challenges with the discovery of new pests and diseases such as colony collapse disorder, Erythrina gall wasp, *Poliaspis cycad*, and *Idcerya genistae* Hempel. The division continues to battle known pests and disease such as increasing populations of Africanized honey bees, a reoccurrence of gladiolus rust, and positive sudden oak death finds in nurseries. It battles citrus greening and citrus canker through further development of the Citrus Health Response Program. The division is also on guard and on the lookout for new pests and diseases of agricultural importance such as the red palm mite, fruit flies of economic importance, lime swallowtail butterfly, and light brown apple moth.

Florida's citrus industry and the division are working closely with the USDA to continue developing and implementing the Citrus Health Response Program. This program covers a number of areas, including citrus nursery stock, growers, harvesters, proces-

sors, packers, and residential citrus. This fiscal year the USDA revised federal regulations that govern the movement of citrus fruit and plant material out of Florida. Regulations included placing Florida under a statewide quarantine for citrus canker, mandating pre-harvest citrus canker surveys within 30 days of harvest for non-citrus-producing domestic markets, and banning citrus shipments to citrus-producing states and territories. This rule took effect August 1, 2006. This federal rule change causes an increase in fresh fruit survey inspection for Department inspectors. It is anticipated the USDA will change this rule for the upcoming 2007-2008 season and remove the 30-day pre-harvest inspection. The inspection of fresh fruit would then move under USDA jurisdiction in the packinghouse. This new rule will hopefully be in effect October 1, 2007, and cover the majority of the 2007-2008 harvesting season.

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Pest Eradication and Control

The Bureau of Pest Eradication and Control is a statewide program, headquartered in Winter Haven and operated from five offices in various citrus-producing regions of the state. It focuses on the control and eradication of harmful pests and diseases with emphasis on citrus. Until January 2006, the bureau's efforts were aimed primarily at the detection and eradication of citrus canker to keep the disease from spreading. However, the Citrus Canker Eradication Program ended in January 2006 when USDA determined that eradication was no longer possible. In response to the need to manage citrus canker and other diseases, including potentially devastating citrus greening, a cooperative program between citrus growers, the Department, and the USDA was initiated. This is known as the Citrus Health Response Program (CHRP).

The Bureau of Pest Eradication and Control performs CHRP commercial grove survey and regulatory activities through its headquarters and field stations in Winter Haven, Tavares, Avon Park, Immokalee, and Fort Pierce. With the transition to the CHRP during the 2006-2007 citrus harvest season, program efforts targeted the survey of groves harvesting fresh fruit for foreign and domestic markets. During the fiscal year, over 176,683 acres of groves were surveyed in anticipation of fresh fruit shipment. With the implementation of new rules governing nurseries, the bureau provides nursery environs surveys. These surveys include commercial and residential properties in proximity to commercial citrus nurseries. They are conducted in order to protect nursery trees from citrus canker, citrus greening, and other citrus diseases. More than 34,851 acres surrounding nurseries were surveyed during fiscal year 2006-2007. General grove surveys are performed annually to monitor commer-

cial citrus grove acreage in the state. Combining all survey types, a total of 491,108 acres was surveyed in fiscal year 2006-2007.

The Bureau of Pest Eradication and Control was involved in additional projects during fiscal year 2006-2007. These included a series of surveys for gladiolus rust, detected in late June 2006 in Manatee County. Bureau employees participated in field and residential surveys to detect and identify the disease, collecting samples for testing. Efforts to eliminate the disease in conjunction with USDA are ongoing. Another project in which the bureau participated was a citrus greening detection survey along the Interstate 4 corridor across central Florida. This was a combined state and federal effort to identify the extent of citrus greening in the state and included residential and commercial surveys in selected areas of Hernando, Lake, Orange, Pasco, Polk, Seminole, Sumter, and Volusia counties during March and April 2007. Over 70 USDA and bureau personnel participated in the survey and collected samples from 18,000 commercial acres and more than 11,000 residential properties. The state and USDA continue to monitor the incidence and spread of citrus greening, or HLB, and its vector, the Asian citrus psyllid, in randomized multiple pest surveys (MPS). All bureau offices participated to survey 82,914 acres. The disease and vector have been found in the majority of Florida's citrus-growing counties, and citrus greening is now considered a major challenge to the state's citrus industry and is receiving a great deal of attention in the development of effective control strategies.

With the discontinuation of the Citrus Canker Eradication Program, two offices (Arcadia and Palmetto) with decreased workloads closed March 31, 2007. Grove survey areas for those offices were assigned to other CHRP offices.

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The purpose of the Bureau of Pest Eradication and Control's regulatory branch is to enforce state laws and rules designed to prevent the spread of pests and diseases occurring throughout the state. This branch serves to help prevent the artificial spread of disease organisms by educating the public and by regulating the movement of host plants, plant material, and insect vectors, as well as exposed personnel and equipment in areas where these plants and insects are cultivated or otherwise found. For the past several years, the regulatory section has concentrated on monitoring and protecting Florida's citrus industry and its interstate and export markets by assuring that shipments of fresh fruit are free of citrus canker and other pests of concern.

Fiscal year 2006-2007 was a period of transition in operations for the Bureau of Pest Eradication and Control from the Citrus Canker Eradication Program to the Citrus Health Response Program. The bureau's survey and regulatory efforts are primarily focused on commercial citrus groves and regulating harvesting operations, while federal counterparts (USDA-APHIS) regulate packinghouses, inspecting the fruit on the grading belts for canker lesions, and regulate the movement of citrus fruit for markets beyond the borders of Florida.

New compliance agreements were issued in the summer of 2006 for the 2006-2007 citrus fruit harvesting season in anticipation of the entire state becoming quarantined for citrus canker by a new Federal Interim Rule, which became effective on August 1, 2006. The grower's compliance agreements also included a new fresh fruit application, which was required in order to ship fruit to interstate and other restricted markets. This new application was the first step in a new protocol set forth by USDA for all shipments of citrus leaving Florida. The protocol required that all production units be

registered and surveyed prior to harvest for citrus canker disease symptoms. If no symptoms were found after July 1, 2006, based on inspection within 30 days of harvest, a Citrus Fruit Harvesting Permit could be issued, which was required in order to harvest fruit for shipment to restricted markets. This permitting process, which involved pre-harvest surveys and the issuance of time-sensitive harvesting permits, triggered the need for the Bureau of Pest Eradication and Control to recruit a large number of extra workers to help keep up with the demand for surveys and permits in the fall of 2006. Due to subsequent changes, in early 2007 the bureau was notified that it must scale down the CHERP and plans were made to reduce the workforce by 200 employees. This layoff has only been partially implemented as the USDA agreed to provide temporary funding to retain employee resources pending the establishment of a new Federal Rule, which is expected to be in place on or about October 1, 2007.

Decontamination of personnel and regulated articles continues to be the best line of defense against the artificial spread of citrus canker. The regulatory section inspects all regulated entities to ensure that decontamination rules are followed. Compliance agreements are issued to all regulated entities to ensure that these companies or individuals are registered with the Department and are aware of the rules. Other documents are also issued to regulated companies in order to control the movement of these articles as required, including harvesting permits, stop-sale/hold orders, emergency action notifications and special permits. Reports of Violation are issued for non-compliance, with penalties that range incrementally from a one-time administrative warning to a \$5,000 fine and revocation of the violator's compliance agreement.

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The shift from isolated canker quarantines within the state to the overall quarantine of the entire state for citrus canker produced a paradigm shift for the use of limited permits. These permits were previously used in the eradication program primarily for the protection of asymptomatic citrus groves within Florida. With the entire state under quarantine, there is no longer any reason to restrict the intra-state movement of fruit. Reports of violation were down this year due to the change in requirements under CHRP.

Public Relations and Education

In support of the Department's mission to provide the best service to the citizens of Florida, the Bureau of Pest Eradication and Control, with guidance and assistance from the Division of Plant Industry's Technical Assistance Section, helps to develop and administer educational outreach programs. These programs help keep the public apprised of the bureau's activities and services as well as provide internal training courses for division staff.

During this past year, the Bureau of Pest Eradication and Control participated in a number of industry-sponsored seminars, including the Citrus Expo in Lee County and the Indian River Citrus Seminar in Fort Pierce, and attended many more industry-related events. A series of information and training sessions for growers, caretakers, and all segments of industry was provided on topics of citrus greening, citrus psyllids, and citrus canker identification. The sessions provided discussion of the survey, control, and management of these diseases, information and training on decontamination, and updates of current regulatory requirements. Some sessions were conducted in more formal settings at

various agricultural facilities, and others were held on site in groves for first-hand observation. With the joint participation of experts from the Department, UF-IFAS, USDA, and industry, the sessions reached hundreds of interested parties with updated, valuable information.

Citrus Budwood Registration

Citrus budwood and nursery production have undergone a quick and dramatic change this year. At the beginning of the year, very few nurseries or budwood sources were sufficiently protected against insects vectoring disease; but by year's end, nursery production had completely shifted to enclosed production with increased inspection. Citrus greening is the cause for these drastic measures, and the new nursery stock production regulations took effect January 1, 2007. New citrus nurseries have to be located at least one mile away from commercial citrus groves to give a degree of separation from disease inoculum sources. Existing citrus nurseries were not required to relocate; however, total enclosure of stock was required, along with other sanitary measures. Protective actions resulted in higher nursery production costs, thus resulting in higher nursery tree prices.

Three citrus nurseries were established north of the traditional commercial citrus belt in Florida to escape disease pressure. Other nurseries built new structures or modified existing greenhouses with emphasis on insect exclusion. Double entryways had to be added to every greenhouse, with air being forced out of the first entry door. By the end of the fiscal year, 40 nurseries had made the conversion and passed the rigorous inspection required to produce citrus nursery stock.

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All propagating material had to be protected in greenhouses that meet the same standard as the nursery production houses. By the end of the fiscal year, 4,386 scion trees were protected in enclosed greenhouses. Increase blocks likewise were required to be totally enclosed. Budwood supplies should be safer now than ever before due to the enclosures, increased inspection, and appropriate chemical applications.

Foundation budwood sources are required to be at least 10 miles away from commercial citrus groves, and a new budwood greenhouse facility is being constructed in Chiefland. The new greenhouse ranges will be approximately 70,000 square feet and are designed to preserve germplasm, as well as provide a start for nurseries to establish their own scion source trees. The long-term goal is for nurseries to have enough scion trees so they can be self-sufficient in supplying their own increase blocks without bringing outside sources into their nurseries.

The bureau distributed 182,106 budeyes from foundation trees this fiscal year. Budwood personnel made 64 cuttings to supply 25 different customers.

A small greenhouse was built at Chiefland last fiscal year, and the first 180 citrus trees were moved to Chiefland on October 12, 2006. Site preparation began April 2, 2007, for the main foundation greenhouse ranges, with the first posts being set in concrete on April 9, 2007. The greenhouses are expected to be completed during the first quarter of the 2007-2008 fiscal year. In the future, a second foundation and germplasm introduction facility is slated for construction on another site in Alachua County.

The budwood testing laboratory has been strengthened this fiscal year with the addition of two new staff positions which will assist in graft-transmissible pathogen testing. The emphasis on testing industry source trees for citrus greening and other citrus pathogens is critical for the success of the bureau's clean stock program. New equipment has been procured to test for HLB. Already the laboratory has made 2,644 extractions for HLB testing, and 3,637 other pathogen determinations were made in the lab and greenhouses this fiscal year. Another change this year has been taking over program testing for citrus tristeza virus in program scion trees. This increase in testing will require additional assistance for field sample collection.

Citrus nurseries propagated over 2.5 million trees this fiscal year compared to 1.4 million trees the previous fiscal year. This was the last fiscal year that nursery trees could be field grown. The regulation requiring greenhouse-enclosed trees took effect halfway into the fiscal year, so nursery propagations this fiscal year consist of both field- and greenhouse-grown stock. Next fiscal year's reporting will consist of only greenhouse-produced trees.

Hamlin and Valencia continue to be the two most widely produced trees in Florida. Midsweet was the third-most popular variety propagated, followed by Rhode Red Valencia and Ray Ruby Red Grapefruit. Swingle Citrumelo continues to be the most popular rootstock for the 19th straight year. Carrizo and Kuharske citrange were the second- and third-most popular rootstocks utilized.

Six staff members left the bureau this fiscal year, after having six employees resign the previous fiscal year. Retaining experienced staff has become as big a challenge as fighting disease. Reorganizing

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the division's nursery inspection team resulted in the transfer of bureau inspectors to the Bureau of Plant Inspection. Retirement and resignations also led to bureau personnel turnover. The bureau faces a great challenge in rebuilding after more than 100 years of employee experience was lost this fiscal year.

Methods Development and Biological Control

The Bureau of Methods Development and Biological Control was involved in several cooperative biological control programs during this past year, as well as technology transfer and other supportive functions for the Division of Plant Industry. Listed below are several insects produced for research purposes or biological control agents.

Caribbean Fruit Fly

The Biological Control Rearing Facility continued production of the Caribbean fruit fly (*Anastrepha suspensa*, Loew), rearing approximately 75 million with an average larval and pupal yield per diet tray of 48,738. A new method of stocking adult cages was developed to provide for increased egg production throughout the entire cage cycle, which requires fewer cages to be online at a given time, saving material and labor costs. Various life stages were supplied to researchers at the University of Florida, the USDA, and the Division of Plant Industry's alternative pesticide testing, encompassing both soil drench and bait station technology.

Diaprepes Root Weevil

Mass rearing of *Diaprepes abbreviatus* continued at the Biological Control Rearing Facility to provide various life stages to researchers developing control strategies against this pest. Multiple diet cups were infested with 161,000 neonates, of which 24,000 were transferred to single cups. From these, over 13,000 pupated and emerged as adults. New field stock was obtained and introduced into the laboratory colony this year to enhance the gene pool and ensure high-quality insects for distribution. Demand for research specimens was again lower due to the increased focus on citrus canker and greening. However, over 6,000 eggs, 16,000 neonates, 7,200 grubs, 120 pupae, and 5,300 adults were shipped to 10 different researchers.



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Diaprepes* Root Weevil and parasite, *Quadrastichus haitiensis

Biological control of *Diaprepes abbreviatus* was initiated in 1969 by introduction of the parasite, *Quadrastichus haitiensis* from Puerto Rico. The parasite was reared in Apopka and released in Indian River citrus areas; but surveys after these releases showed that the parasite was not established in Florida. The reintroduction of *Q. haitiensis* from Puerto Rico was done again in 1998. Mass-rearing methods were developed, and field releases of this parasite were started in late 1998. At present, the parasite has been established in several locations in Miami-Dade and Broward counties. During the 2006-2007 fiscal year, 2,063,760 *Q. haitiensis* were sent to 25 cooperators in Florida. In May and June 2007, 56,000 *Q. haitiensis* were sent to Texas for a biological control project in the Rio Grand Valley.

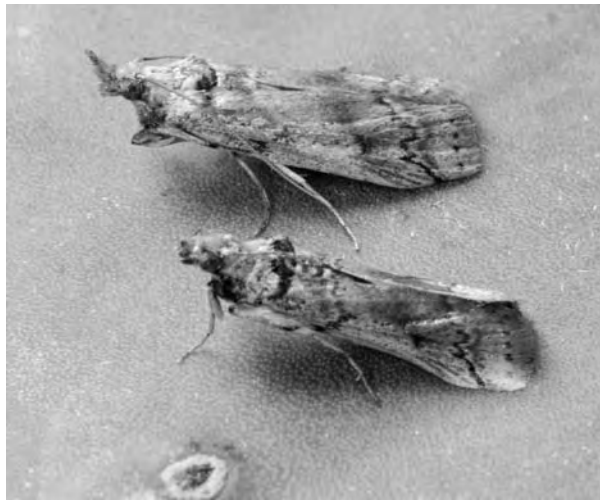


Phorid Flies (*Pseudacteon* sp.)

Mass rearing of the phorid flies *P. tricusps* and *P. curvatus* continued at the Biological Control Rearing Facility as part of a joint venture with the USDA to release these parasitoids as biological control agents against the imported fire ant, *Solenopsis invicta*. A third species, *P. obtusus*, was also released from quarantine by the USDA this year, and mass rearing of this fly has begun as well. This endeavor encompasses personnel and resources from the Division of Plant Industry, USDA-ARS and APHIS, and other agencies in many of the southern states. Funding for the project continues to be provided primarily through a cooperative agreement with USDA-APHIS. Currently, 14 specially designed attack boxes are online and over 2.6 million flies of all species combined were produced this past fiscal year.

The USDA-APHIS Gulfport Mississippi Laboratory continues to coordinate the field release efforts with various federal and state cooperators. During this past year, the Biological Control Rearing Facility supplied *P. tricusps* to six states and *P. curvatus* to nine states for release or research purposes. During the coming year, the plan is to begin distribution of *P. obtusus* in addition to the other two species. It is expected that these phorid flies and additional species will become successfully established throughout the entire southeastern United States within the next three to five years. These various phorid flies will work together to help suppress the imported fire ant because they each attack a different size worker ant and at different times of the day. This should allow for a reduction in pesticide usage and give native ant species and other insects as well as ground-nesting birds, reptiles, amphibians, and mammals an opportunity to re-establish themselves in numerous environmental niches.

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Cactus Moth

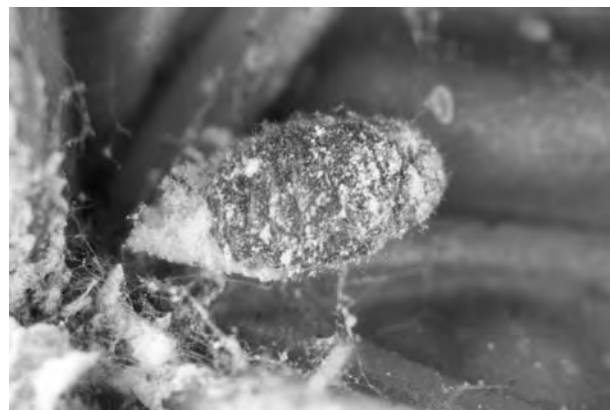
The Biological Control Rearing Facility began rearing the cactus moth (*Cactoblastis cactorum*) as part of a cooperative agreement with the USDA to help combat this recently introduced pest. The overall goal of the program is to establish a barrier in the panhandle of Florida utilizing the sterile insect technique, whereby large numbers of sterile or partially sterile insects are mass reared and released to mate with the wild population, producing no progeny or sterile ones. This barrier will attempt to prevent the spread of the cactus moth from Florida, where it has become established, to the mid-west and western regions of the country and into Mexico. If the moth migrates to the southwest or to Mexico, it will cause serious damage to desert ecosystems and agricultural production in those areas.

The facility reared more than 9,000 moths on cactus cladodes and artificial diet during this past year. The correct irradiation dose to sterilize the moths was also determined for the linear accelerator which is housed at the Florida Accelerator Services and Technology located next to the Biological Control Rearing Facility. The focus now is on establishing

the necessary infrastructure to mass rear the moth and then to establish a shipping protocol for field releases of sterile insects. Further investigations will also be conducted to try and manage diseases which commonly befall this insect when it is reared on artificial diet.

Pink Hibiscus Mealybug

A cooperative agreement with USDA was initiated in 2005 to provide a regional mass-rearing facility for two parasites and one predator of pink hibiscus mealybug. The facility infrastructure was completed in April 2006. Several crops of Japanese pumpkin, the preferred host of pink hibiscus mealybug, were grown in cooperation with the University of Florida/IFAS in Citra and Hastings, and the USDA-ARS in Fort Pierce. The crops were successful, producing 5,718 pumpkins weighing over 17,000 pounds. Subsequent crops will be grown in the summer and fall of 2007. The PHM biological-rearing facility produced a total of 1,600,777 parasites (*Anagyrus kamali* and *Gyranoidea indica*) and 14,476 predatory ladybeetles (*Cryptolaemus montrouzieri*). Currently, there are 25 counties in Florida receiving parasites for release. A standard operating procedure project manual for pink hibiscus mealybug production has been compiled.



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Tropical Soda Apple

A cooperative agreement with the USDA continued for the rearing and distribution of the South American leaf-eating beetle *Gratiana boliviana* as a bio-control for the noxious weed tropical soda apple (*Solanum viarum*). The objective was to rear as many of these beetles as possible and distribute them to locations around the state of Florida where the weed is prevalent. One problem in the production of the beetle is that the insect naturally goes into diapause over the winter months when temperatures are lower and day lengths are shorter. However, over the winter months since the program began an active population was maintained in a laboratory trailer with temperatures kept between 75 and 85 degrees F and artificial lighting provided to simulate a 14-hour photoperiod. This allowed outdoor production to start in the spring with a larger amount of beetles than the previous year. This past spring, a third screen house was built at the Fort Pierce Farmers' Market to further assist in the rearing of the beetles. A full-time technician maintained the host plants and harvested the beetles each week. The beetles were given to government agencies and private individuals for distribution throughout Florida where tropical soda apple is a problem. During this period, 11,775 adult beetles from this facility were released throughout Florida to help control tropical soda apple. Other researchers received an additional 550 adults and 150 eggs to assist in their work. A central database holds results of this program, along with data from a similar program run by the University of Florida and the USDA.

Asian Cycad Scale

Asian cycad scale (*Aulacaspis yasumatsui*) was first identified in Florida in Miami-Dade County in 1996. The infestation had apparently been present at least one or two years. This pest of cycads has since spread to at least 25 Florida counties, and heavy infestations have been reported from Alachua County to Miami-Dade County. In February 2002, the Division of Plant Industry collected the parasitoid *Coccobius fulvus* from infested cycads in the Naples area and released about 11,000 of these parasitoids in about 15 infested counties extending from the Orlando area south. Unfortunately, surveys during the past three years have indicated that *C. fulvus* has not provided adequate control of Asian cycad scale populations.

During the continued search for natural enemies of cycad scale (funded by UF-IFAS and Division of Plant Industry), Dr. Ren Hui found *C. fulvus* in Guangdong, China. This parasite from Guangdong was collected and sent to the Gainesville quarantine laboratory in October 2004 with hope that the Chinese strain of this insect would have better success than the ones collected from Naples. A permit for release from quarantine was granted in June 2005. In early fall of 2005, 2,300 *C. fulvus* were released in the Gainesville area. Additional shipments of cycad scale and natural enemies were received from Vietnam in March 2006 and from China throughout the fiscal year. A search for the natural enemies of cycad scale in Southern China and North Vietnam was conducted in September 2006. Two parasites, *Aprostocetus purpureus* and *Arrhenophagus chionaspidis*, were collected during that trip. Those parasites are being reared in the Division of Plant Industry's quarantine laboratory in Gainesville and in the IFAS facility in Fort Pierce.

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Asian Citrus Psyllid

Division of Plant Industry personnel discovered Asian citrus psyllid, *Diaphorina citri*, at Boynton Beach on June 2, 1998. It had spread to 28 counties by 2001. It is one of the most efficient vectors of greening disease of citrus. In cooperation with UF-IFAS, two parasites of *D. citri*, *Diaphorencyrtus aligarhensis* and *Tamarixia radiata*, were introduced in the Division of Plant Industry's quarantine laboratory October 21, 1998. A permit for field release was granted on July 12, 1999, for *T. radiata*, and on March 10, 2000, for *D. aligarhensis*. In fiscal year 2006-2007, approximately 34,586 *T. radiata* and *D. aligarhensis* were reared and released from the Division of Plant Industry's laboratory. Division staff continue to monitor the effectiveness of these parasites as they search for new strains of the parasites in Asia. During a trip to Southern China in September 2006, scientists collected a new strain of *D. aligarhensis* in Guangzhou, Guangdong, China. Permit for field release of this strain was granted by USDA-APHIS-PPQ on June 1, 2007. The new strain of *D. aligarhensis* will be mass reared at a DPI rearing facility and released into Florida citrus areas in the near future.

Brown Citrus Aphid

Brown citrus aphid (*Toxoptera citricida*) was detected in Broward and Miami-Dade counties in November 1995 and has since spread throughout the citrus-growing region of Florida. It causes economic losses by feeding on young citrus foliage and depleting sap. This aphid is one of the most serious pests of citrus due to its transmission of citrus tristeza virus (CTV). *Lipolexis oregmae* adults from Guam were imported into the Department's quarantine laboratory on August 19, 1999, and a permit

for release of this parasite was granted on June 21, 2000. During the 2006-2007 fiscal year, 29,326 parasites were released.

Citrus Leafminer

The Department has continued to rear and release the citrus leafminer parasite (*Ageniaspis citricola*), especially in areas that are infested with citrus canker in South Florida. This parasite has been established in citrus-growing areas in Florida. Citrus leafminer populations were high in 2002, especially on young groves. To complement *A. citricola*, the parasites *Semiolacher petiolatus* and *Citrostichus phyllocnistoides* were introduced into the Division of Plant Industry's quarantine laboratory in July and August 2003. A permit application to release *C. phyllocnistoides* from quarantine was granted in May 2006 and subsequent releases initiated in Immokalee in June 2006. During the 2006-2007 fiscal year, 8,780 parasites were released.

Lobate Lac Scale

Lobate lac scale (*Paratachardina lobata*) was first found in Broward County in 1999. This species, from India and Sri Lanka, has rapidly become a serious pest of several ornamental and native plants in South Florida. Cooperative efforts with UF-IFAS and USDA-ARS, Fort Lauderdale, are under way to secure and introduce parasites from its native land. Two shipments of *Kerria lacca*, a commercial lac scale collected from Thailand, were sent to the quarantine laboratory in October 2003 and March 2004. Six parasites and two predators emerged from the shipment in March, and over 1,000 parasitoids representing three species emerged from the March 2004 shipment. Among those parasites, *Coccophagus tschirchii* and *Tachardiaephagus tachardiae* were listed in the literature as primary

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parasites of *K. lacca* and lobate lac scale. Unfortunately neither parasite could be reared on lobate lac scale in the quarantine laboratory in Gainesville. A subsequent shipment of parasites from India was received in August 2005 and is still under evaluation.

Alternative Pesticide Research and other Technique Development

The degree-day accumulation study was completed for eggs, larvae, and pupae of Caribbean fruit flies (*Anastrepha suspense*, Loew), for inclusion in the national Tephritid database. Each stage of an organism's development has its own total heat requirements, which can be estimated by accumulating degree-days between temperature thresholds throughout the season. Degree-day monitoring provides an approximation of when a pest will reach susceptible life stages, thus eliminating the guesswork otherwise required to determine the time for a control action.

New delivery methods for attractants are being developed to improve Tephritid trapping and detection programs. Experiments were conducted with the USDA-ARS in Gainesville, to evaluate the durability of a single matrix, three-component (cone) attractant under simulated Florida weather conditions. At three ranges of temperature and relative humidity chosen to mimic seasonal norms, the single cone lure maintained its integrity within the trap during each six-week test. This cone was accepted for use in the Fruit Fly Detection Program.

Mating tests were performed between laboratory reared sterile Mexican fruit flies (*Anastrepha ludens*, Loew), and fertile Caribbean fruit flies (*A. suspensa*, Loew). The level of mating was highest in the Caribfly-Caribfly cages (approximately 75 percent),

and the incidence of mating in the cages that held Mexfly males and Caribfly females was nearly identical to that of the Mexfly-Mexfly cages (approximately 55 percent). The Caribfly males were much less likely to be able to mate with the Mexfly females, due to the length of the Mexfly ovipositor, but successful mating did occur (approximately 20 percent).

Research was continued with numerous pesticides from chemical classes with different modes of action in concurrent laboratory and field bioassays to find potential replacements for diazinon as a chemical soil drench for emergency programs used to control fruit flies of economic importance. Any possible replacement must display efficacy similar to or better than diazinon, but should also be considered safer and less toxic to beneficial organisms and to human health. The candidates tested were GardStar (permethrin), Regent (fipronil), and Warrior (lambda-cyhalothrin).

Research in the development and preparation of artificial diets for *Cactoblastis cactorum* larvae and for the *Cryptolaemus montrouzieri* lady-beetle predator of the pink hibiscus mealybug was investigated.

Florida Accelerator Services and Technology (FAST)

Florida Accelerator Services and Technology, or FAST, continues to provide irradiation services supporting research programs conducted by the Department, the University of Florida, USDA, and private industry. Products irradiated include salmon fillets, Brazilian pepper moth adults, potted plants, citrus greening DNA, plant tissue, polymer grafts, insect diet, bee pollen, rice seed, cactus moth adults, Diaprepes insect diet, grass cuttings, semi-conductors, and fruit fly eggs, larvae, and pupae.

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Medfly Eclosion/Release Facility for SIT/PRP

The Preventative Release Program continued the aerial release of sterile Mediterranean fruit flies to deter the establishment of introduced wild flies. This facility also acts as reserves for a Sterile Release Program should an infestation occur, and a startup facility for other species of sterile fruit flies if available. Sterile Medflies were released over a 572-square-mile area, which included Miami-Dade, Hillsborough, Manatee, and Sarasota counties, at a rate of 141,208 per square mile or a total of 80,771,186 per week. A total of more than 4.2 billion sterile Medflies were released during this reporting period.

Other projects originating at the facility included ongoing testing of new trap and lure combinations in various area citrus groves. Facility supervisors made some changes to the humidity control system and reduced the height of the eclosion towers from 55 trays to 50 trays, reducing the tower temperatures, contributing to consistently higher quality control figures. Maintenance personnel completed the first phase of adding electrical outlets for 66 additional eclosion tower spaces to be used in an emergency program. Division of Plant Industry personnel continued to assist with the exotic pest surveys and research in cooperation with the Cooperative Agricultural Pest Survey. Tours of the facility were conducted for personnel from various areas and supervisors as requested.

Apiary Research

Methods bureau personnel in collaboration with the Bureau of Apiary Inspection continue to work on control for several apiary pests. Some of the tests included: (1) Determining optimum varroa mite (*Varroa destructor*) economic treatment thresholds

and powdered sugar efficacy trial; (2) Investigating the use of small cell foundation (5.1mm to 4.9mm) as a tool for varroa mite (*Varroa destructor*) control; and (3) Using Certan-B-401, *Bacillus thuringiensis* (Bt) for control of wax moths (*Galleria mellonella*) in Florida's apiary industry.



Caribbean Fruit Fly Research and Activities

This office maintains three continuous Caribbean fruit fly trap lines using plastic McPhail-type traps in portions of Indian River, Martin, and St. Lucie counties. These traps are serviced weekly and the results (number of flies caught, sex of flies, species, and condition of host plant) are tabulated for later reference concerning the variation in the seasonal Caribbean fruit fly population. This data supports the Caribbean Fruit Fly Certification Program trapping information on fly populations in the urban area and is useful when conducting tests that involve the use of biological control agents or other suppression/control programs. This data was also given to another agency that included it in its larger GIS program.

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A study to search for unknown hosts of the Caribbean fruit fly continues. Many species of ripe fruit collected off the tree or under the tree are incubated to see what species of insects develop. While no new hosts for Caribbean fruit fly were discovered, new relationships of these fruits to other insects were discovered.

Training and Compliance/Fumigation/ Miscellaneous Activities

Methods Bureau personnel continued to provide training and testing for employees for Restricted Use Pesticide (RUP) Licenses. The bureau coordinated employee applications and maintained records of CEUs for those licenses, provided recordkeeping for Right-To-Know and Material Safety Data Sheet (MSDS) files, coordinated disposal of hazardous chemicals produced at the Division of Plant Industry, and provided security/monitoring of the Gainesville facilities.

Fumigation of specimens, books, reprints, etc., for the Florida State Collection of Arthropods continued at the Gainesville fumigation chambers. Annual evaluations and certifications of methyl bromide fumigation chambers used for blueberry fumigation were conducted during this period.

The bureau also provides technical assistance in the rearing and maintenance of a mole cricket colony located at the UF-IFAS in Gainesville. This colony is a source of healthy specimens necessary to carry on different control research projects conducted throughout Florida. Assistance was given to the UF-IFAS with the release of a biological control agent against a mole cricket. These releases were conducted mainly in South Florida.

Personnel conducted bioassays and bulk-density determinations to comply with Imported Fire Ant Program regulations.

Bureau personnel often aid with document translation and tours of facilities to domestic and foreign visitors as well as daily oversight and support to employees and community organizations using Doyle Conner Building facilities.

Plant and Apiary Inspection

Plant Inspection

At the end of fiscal year 2006-2007, there were 7,875 nurseries (9,688 block locations) with an inventory of 636,811,523 plants classified as nursery stock. There are 3,420 nursery stock dealers (7,823 outlet locations) registered with the Department.

Inspectors made 31,632 inspections of nursery and stock dealer establishments. As a result of these inspections, 691,416 plants were quarantined. There were 9,779 federal and 4,448 state certificates issued for shipments of plants and plant products exported from Florida.

Department personnel inspected 5,305 shipments of plants and plant products imported into Florida from other states and countries, including 1,090 shipments of nursery stock. These inspections resulted in 329 (97 for nursery stock) regulatory actions for plant pests of quarantine significance. A total of 7,589 soil and root samples were collected and analyzed specifically for burrowing nematodes as required by the Burrowing Nematode Certification Program. The Burrowing Nematode Certification Program had 1,113 ornamental nurseries under certification as of June 30, 2007.

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Department personnel tended 292 gypsy moth traps in North Florida. Other seasonal traps include boll weevil traps and European corn borer traps. Department and USDA personnel tended more than 55,323 traps for exotic fruit fly detection.

Citrus Health Response Program Nursery Inspection Program

As of June 30, 2007, there were 1,218 nursery blocks and stock dealer outlets inspected on a 60-day cycle for citrus inventory. This compares to a total of 1,301 nursery blocks and stock dealer outlets inspected on a 60-day cycle as of June 30, 2006. There are 45 locations that are identified as commercial (certified free of burrowing nematode) citrus nurseries. Commercial citrus nurseries are inspected on a 30-day inspection cycle.

Pink Hibiscus Mealybug

Between July 1, 2006 and June 30, 2007, Department personnel witnessed the destruction of 11,334 plants as a result of pink hibiscus mealybug (PHM). During this period, Division of Plant Inspection personnel spent 4,917 hours working on PHM-related issues. There were 116 quarantine actions to nurseries and nursery stock dealers for PHM. As of June 30, 2007, 29 of those locations currently have plants that remain under quarantine.

Sudden Oak Death (SOD)

Phytophthora ramorum, the causal agent of sudden oak death, ramorum blight, and ramorum die-back, is known to occur in coastal forests and in landscape plantings in Europe. It has also been



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detected in some horticultural nurseries in the United States. *Phytophthora ramorum* is one of a number of organisms (although not true fungi) that are collectively called “water molds.” *Phytophthora* is translated to “plant destroyer” and most of the *Phytophthora* species are plant pathogens, many with extremely large host ranges.

During fiscal year 2006-2007, Plant Inspection personnel submitted 380 samples for SOD. Of these samples, 43 were Elisa positive, and 18 samples were PCR positive for *Phytophthora ramorum*. Regulatory actions were taken at one nursery location and one non-nursery location in North Florida.

Gladiolus Rust

Uromyces transversalis, the causal agent of gladiolus rust (GR), is an obligate parasite that only grows and reproduces on members of the family Iridaceae, including *Gladiolus*, *Tritonia*, *Crocasmia*, and *Watsonia* spp. GR was confirmed to be present in the United States in April 2007. As of June 30, 2007, regulatory actions and eradication efforts continue at two locations in a cooperative effort between USDA and the Division of Plant Industry. Inspectors have spent 1,605 hours conducting surveys and control measures for gladiolus rust.

Violations and Stop-Sale and Hold Orders

Between July 1, 2006, and June 30, 2007, Division of Plant Industry personnel issued four violations. There were 1,112 stop-sale and hold orders for failure to renew annual registration. During the same period of time, 777 stop-sale and hold orders have been released as a result of fee payment or going out of business. Bureau personnel also issued 34 stop-sale and hold orders for pests and diseases such as citrus canker, citrus greening, pink hibiscus mealybug, and restricted aquatic plants.

Caribbean Fruit Fly Certification Program

The Caribbean fruit fly is a serious pest of many tropical and subtropical fruits of Central and South Florida. The fly-free zone certification protocol was developed to certify citrus fruit as free of Caribbean fruit fly larvae. Bermuda, Brazil, Colombia, Ecuador, Japan, Korea, New Zealand, Philippines, Thailand, the People's Republic of China, Vietnam, and the states of California, Hawaii, and Texas have accepted this certification procedure, which is fully funded by grower assessments. Fruit shipped to these areas must originate in specific Caribbean

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fruit fly-controlled or -designated areas in citrus-producing counties approved for shipment of fruit.

In the 2006-2007 season, 115,320 acres were certified in 22 eligible counties. The protocol establishes a safe and effective procedure for exporting citrus to areas requiring quarantine safeguards. Japan is currently the largest importer of fresh Florida grapefruit; 8,065,837 cartons of citrus fruit were shipped to Japan under the protocol certification program this season.

Boll Weevil Eradication

At the close of the 2006 cotton-growing season, there were 375 commercial cotton producers in the state. These producers planted 100,136 acres of cotton in 12 counties, an increase over the 2005 growing season of 85,721 acres of planted cotton. Throughout the 2006 cotton-growing season, there were no boll weevils trapped in the state.

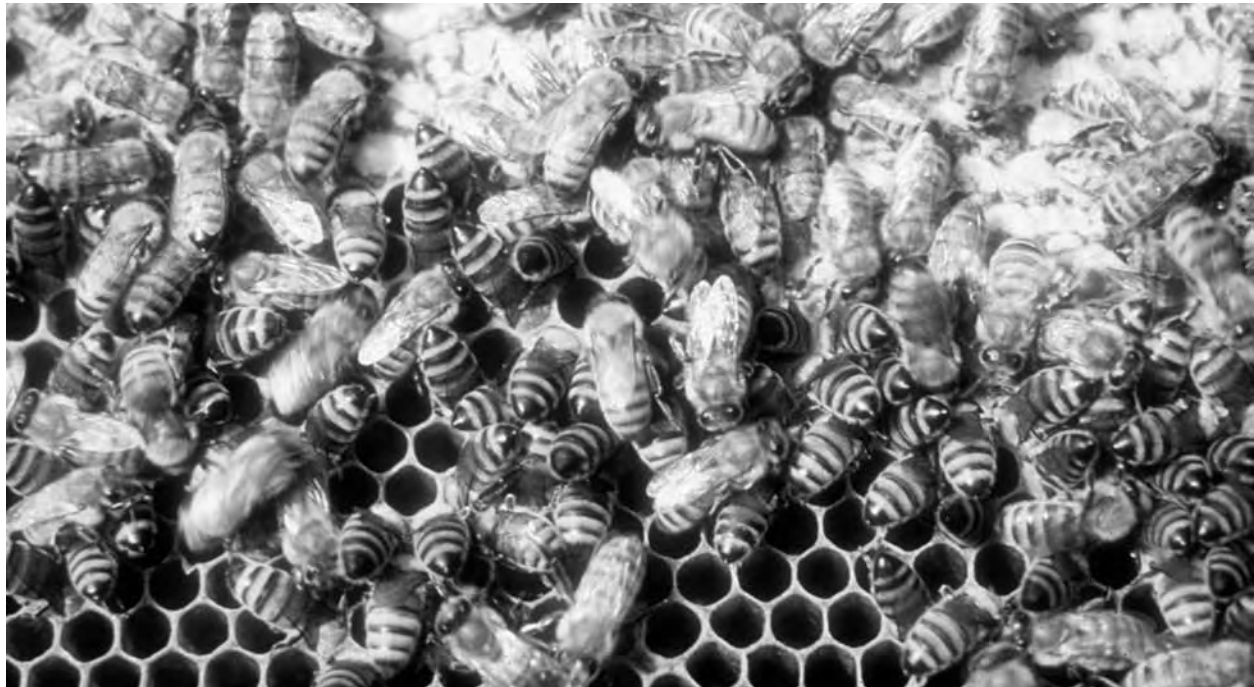
Imported Fire Ant Certification Program

As of June 30, 2007, there were 2,125 nurseries and stock dealers under compliance agreement for Imported Fire Ant (IFA) certification purposes. This compares to a total of 1,492 nurseries and stock dealers under compliance on June 30, 2006. During this period, Plant Inspection personnel spent 8,549 hours associated with IFA activities.

Apiary Inspection

Colony Collapse Disorder (CCD)

Florida has the dubious distinction of being the first state in North America to report Colony Collapse Disorder (CCD). The report was made in October 2006. Losses reached a high of between 50 percent and 90 percent in several Florida businesses. Colony numbers continue to shrink in Florida and



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nationwide. Honey bee colonies in Florida have decreased in just the last several years from a high of 250,000 to 158,000 this fiscal year. Not only is there less honey production, but, more importantly, less pollination of Florida's crops.

CCD die-off is characterized by a sudden reduction of honey bees within a colony, with no evidence of dead or dying bees in or around the hive. The colony simply dwindles over a two-to-three-week period. Bees do not return after leaving the colony for normal foraging activity. Stored honey and bee bread (fermented pollen) are present, and honey bees in various stages of development from egg to pupae are in evidence. In some cases, the queen and a small number of survivor bees may still be present. Robbing or the taking of unprotected resources, like honey, by other bees is delayed for several weeks. Normal invasion into a weak or dead colony by common pests such as wax moths and small hive beetles does not take place immediately as would be expected. Scientific speculation suggests there could be something repelling pests from the empty hives.

The Apiary Inspectors of America's (AIA) survey of U.S. beekeepers estimated the loss of honey bee colonies between 600,000 and 700,000. There are currently 2.4 million honey bee colonies in the United States.

The Division of Plant Industry's Apiary Inspection Section is an active participant and founding member of the Colony Collapse Working Group. This group is composed of collaborators from Pennsylvania State University, Pennsylvania Department of Agriculture, University of Montana, United States Department of Agriculture, and North Carolina State University.

At this time, there is no firm evidence of any one agent or event causing CCD. It may ultimately be the result of several single inputs combined together having a synergistic and devastating outcome. Continuous sampling and analysis for chemical and pathogen interaction is being actively pursued.



Africanized Honey Bee

The Africanized honey bee (AHB) continues to be identified from survey of the approximate 500 AHB traps, pest control operator-collected samples, homeowner-submitted samples, and samples forwarded by UF-IFAS to the division's identification laboratory in Gainesville.

The Apiary Inspection section has led dozens of AHB presentations and participated in conferences throughout Florida and in several other states, thereby reaching thousands of people.

The section's AHB lab was selected for the state's Davis Productivity Award for the development of an AHB identification protocol unique to the southeast United States.

The Florida apiculture industry approved the creation and implementation of Best Management Practices for Florida beekeepers to maintain and manage non-AHB stock.

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The section partnered with UF-IFAS on two levels for a comprehensive approach to AHB training. The first level involves the training of first responders, fire departments, emergency rescue personnel, and police in AHB stinging incidents and the rescue of victims. The second level has been the creation of the African Honey Bee Extension and Education Program at UF-IFAS. This is designed to provide all of Florida with safety and eradication recommendations for AHB.

The Apiary Section – in coordination with other stakeholders in agriculture, state, county, and local government agencies, UF-IFAS, first responders, schools, hospitals, and many others – continues to develop tools and training to protect the beekeeping industry and educate the public on how to effectively and safely deal with this potential danger. The transition to a feral bee population dominated by AHB in Florida is in the future. The Department is working to prevent dangerous stinging incidents.

Apiary Research Activities

The Apiary Section has four research projects under way:

1. Determining Optimum Varroa Mite (*Varroa destructor*) Economic Treatment Thresholds and Powdered Sugar Efficacy Trials.
2. Investigating the Use of Small Cell Foundation (5.1 mm to 4.9 mm) as a Tool for Varroa Mite (*Varroa destructor*) Control.
3. Using Certan, B401, *Bacillus thuringiensis* (Bt) for Control of Wax Moth (*Galleria mellonella*) in Florida's Apiary Industry.
4. Identifying Diet Supplement to Improve Honey Bee Health.

Distribution of Legislative Funds

Legislative funds were allocated for apiary research by a variety of organizations and individuals. Multiple projects will address the challenges and needs of the Florida apiculture industry. Projects include:

1. African Honey Bee Extension Education Program.
2. The Effect of Africanized Honey Bees on Honey Production in the United States.
3. Hygienic Removal by Honey Bees of Parasitic Varroa Mites: Identifying Genetic Loci Responsible for the Trait.
4. Chemical Mediated Biology of Honey Bee – Varroa Mite Interactions for Development of “Mite Safe” Control Methods.
5. Controlling Honey Bee Pests: 50 Percent Formic Acid Fumigation for Controlling Varroa Mites in Florida.
6. A Rapid Test for Africanized Bees.
7. Toward an Africanized Honey Bee “Quick Test” Which Meets the Time and Cost Constraints of Regulatory Agencies.

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Entomology, Nematology and Plant Pathology

Entomology

The Entomology section completed 12,664 separate identifications this year involving 417,158 specimens. During that same period, seven exotic species were found established within the state, all representing new U.S. records. There were also five new state records.

A total of 937 arthropod identification records were entered into the entomology database, and 60,219 records were checked for errors and updated. This brings the number of searchable arthropod identification records to 144,338, with complete records for 1990 through 2006 and partial records as far back as 1980.

Florida State Collection of Arthropods

Donations to the Florida State Collection of Arthropods totaled more than 87,954 specimens, valued at \$416,295. This brings the total number of specimens to well over 8 million. Fourteen guided tours and presentations were given this year, with more than 190 students and adults participating.

Fruit Fly Identification Laboratory (FFIL)

Almost 250 Division of Plant Industry plant inspectors and USDA-APHIS-PPQ fruit-fly-survey specialists serviced approximately 55,000 total traps on both 14- and 21-day intervals as part of the state's Cooperative Fruit Fly Detection and Surveillance Program. Field training for the recognition of fruit flies of economic importance was ongoing throughout the state for both new employees and as an annual refresher for current employees.

A total of 1,058,262 trap inspections were conducted during the fiscal year 2006-2007. Of the traps inspected, 269,254 fruit fly traps were submitted to the FFIL for further screening, resulting in 25.4 percent of all traps inspected being sent in for screening. Approximately 1,946,233 sterile Mediterranean and wild Caribbean fruit flies were processed during this time. There were 185 dissections performed to confirm sterility of Mediterranean fruit flies from the preventive release areas, and there were 101 instances where urgent suspect target economic fruit flies were sent to the FFIL for identification.

Between August 2006 and March 2007, a number of larvae of the Mediterranean fruit fly were found in both lemons and Spanish clementine shipped from Spain. As a precaution, additional surveillance traps were initiated in areas that were potentially affected. However, no adult fruit flies were detected

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during this period. Through the combined early detection and prevention efforts, no economically significant fruit flies became established in Florida during fiscal year 2006-2007.

Botany

For fiscal year 2006-2007, the Botany Section processed 9,996 samples. In addition, 377 specimens were added to the herbarium, bringing the total size of the collection to 9,738 specimens. The number of vials in the seed collection increased to 1,469 with one new addition.

Advanced Diagnostics Laboratory

The Advanced Diagnostics Laboratory (ADL) processed a total of 2,909 samples during 2006-2007, including 1,851 regulatory samples. Various molecular, biochemical, and other analytical techniques were used. Regulatory sample processing included:

Detection and identification:

- Identification of plant pathogenic bacteria, including those responsible for citrus greening and citrus variegated chlorosis (CVC).
- Identification of plant viruses, including poty-, tospo-, potex-, tobamo-, badna-, caulimo-, gemini-, and other virus species.
- Taxonomic diagnosis of *Phytophthora ramorum*, the pathogen responsible for sudden oak death, as well as other *Phytophthora* species.
- Identification of Africanized honey bees using Cuticular Hydrocarbon Analysis (CHCA) and DNA markers.

- Molecular taxonomic analysis of various fruit flies, including a previously unknown species.
- Testing for soil formulation compliance as mandated by the Imported Fire Ant Certification Program.

New molecular diagnostic protocols implemented by the ADL during 2006-2007 included the identification of the citrus psorosis virus.

During 2006-2007, diagnostics for citrus greening continued to dominate the activities of the ADL. A total of 2,123 regulatory greening samples were processed by the lab, which resulted in the determination or confirmation of greening in one additional Florida county and the finding of two previously unrecorded hosts for this disease in the state: *Citrus limonia* and *Severinia buxifolia*. Additionally, research and development to improve the detection of greening continued. This research, in collaboration with the USDA-ARS, included the development of fluorescence in situ hybridization (FISH) microscopy to visualize the putative greening agent, *Candidatus Liberibacter asiaticus* in planta. FISH visualization, together with the ongoing histological analysis of greening in citrus vascular tissue, will allow the first mapping of the distribution and abundance of this pathogen in the host to be carried out.

Another plant pathogenic bacterium of concern in Florida is that responsible for citrus variegated chlorosis (CVC), a strain of *Xylella fastidiosa*. In addition to the routine determination of CVC, so far negative in Florida, the ADL initiated a survey for non-CVC strains of *X. fastidiosa* in citrus from the state.

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Sudden oak death, also known as ramorum blight, caused by the fungus *Phytophthora ramorum*, continues to be periodically detected in Florida nurseries. Confirmation of ramorum blight by the ADL is based on DNA sequence analysis. Other *Phytophthora* species also identified included *P. tropicalis*, *P. capsici*, and *P. nicotianae*.

Noteworthy plant viruses identified or confirmed by sequence analysis at the ADL included the first identification of the Cucurbit leaf crumple virus (geminivirus) and the Impatiens necrotic spot virus and tomato spotted wilt virus (both tospoviruses) from *Phalenopsis* orchids in Florida. In addition, the Canna yellow mottle virus (caulimovirus) was identified from *Canna*, the bean yellow mosaic virus (potyvirus) in *Gladiolus* sp., and a new potyvirus, tentatively named the Passiflora chlorosis virus, found in *Passiflora incense* from Florida.

Citrus Germplasm Introduction Program

The Citrus Germplasm Introduction Program (CGIP) is responsible for processing new and interesting citrus varieties, making them safe for use by Florida's citrus nurserymen, growers, and researchers.

CGIP applies therapeutic treatments of shoot-tip grafting and thermotherapy to eliminate graft-transmissible pathogens and produce healthy budwood sources necessary for clean citrus budwood programs. All therapies are followed by thorough indexing procedures, validating negative pathogen status prior to the release of each new variety.

Seventy new citrus selections entered this year's introduction program. Eleven foreign varieties originated from Argentina, Australia, Italy, and Israel. One California variety arrived, and 58

valuable Florida selections were submitted for cleanup. Seedless triploid mandarins, tetraploid breeding parents, and a canker-tolerant grapefruit were among the imports, while UF-IFAS submitted oil-quality lemon and very promising murcott selections. Lemon trees growing in St. Lucie County became exposed to citrus canker and greening. Although neither of these diseases was confirmed on any of the select lemons, proximity of nearby infections required that the lemons undergo therapy for elimination of both pathogens, prior to moving budwood for propagation. Lastly, six very promising murcott selections were submitted for elimination of citrus tristeza virus.

A total of 48 selections completed therapy and indexing this year. Releases included 33 selections representing 24 varieties of sweet oranges with reported canker tolerance, eight late and one early valencia somaclones, and one somatic hybrid of valencia+murcott.

Thermotherapy is an effective method used for elimination of many citrus pathogens, including severe strains of CTV and African citrus greening. However, there is no evidence available to indicate whether the standard method of thermotherapy (16 weeks of 40/30 degrees C) is effective on Asian citrus greening or citrus leaf blotch virus (CLBV) as they occur in Florida. Therefore, CGIP in cooperation with UF-IFAS, is conducting ongoing investigations into the effectiveness of standard thermotherapy treatments for the elimination of Florida isolates of HLB and CLBV.

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New varieties received:

Argentina:

Dalandan grapefruit

Australia:

Eloise mandarin

4N minneola

4N murcott

4N pummelo, two selections

Israel:

Winola mandarin

California:

Tango murcott

Italy:

C5282 mandarin

Mandalate mandarin

Mandared mandarin

Ota mandarin

UF-IFAS:

Lemons, 52 selections, oil extraction

Murcotts, six selections

New varieties released:

Sweet oranges with canker tolerance

AC303

AC 342

Aziza, 2 selections

Baianinha

Barao

Cadena Punchosa, 2 selections

Caipira Jaguarao

Coco

Do Ceu

Folha Murcha, 3 selections

JinCheng, 2 selections

Masry, 2 selections

Ouro

Rosa

Salustiana, 2 selections

Sanguinelli, 2 selections

Sanguinello Ricco, 2 selections

Seleta Abacaxi

Seleta Agrocitrus

Seleta Branca

Seleta Sete Lagoas

Seleta Vermelha

Serra D'Agua

Tobias

Williams Budded, two selections

Fresh navel orange

Fisher navel (DPI 135-9)

Mandarin-type

Kiyomi tangor (DPI 136)

Seedless kishu mandarin (DPI 137)

Valencia somaclones

Early T1-19

Late N7-14

N9-12

N10-1

N11-2

T1-53

T1-62

T3-41

T4-53

Somatic hybrid

"Valencia+murcott"

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Nematology

The Nematology Section analyzed 15,178 samples consisting of more than 65,890 specimens of plant parasitic nematodes. This diagnostic work involved 22,695 morphological and molecular identifications. Nematological analyses for certification and regulatory programs relative to citrus, ornamentals, and other Florida crops represented 92.7 percent of the total diagnostic work.

The survey to determine the geographical distribution of *Meloidogyne mayaguensis* in Florida was continued during this fiscal year. This root-knot nematode has been found in Alachua, Broward, Miami-Dade, Duval, Flagler, Gilchrist, Hardee, Hendry, Hillsborough, Lee, Marion, Martin, Nassau, Orange, Palm Beach, St. Johns, and St. Lucie counties, where it infects vegetable and agronomic crops, herbs, fruit trees, weeds, and many ornamental plants.

The host response of 22 Florida weeds to the infections of *Meloidogyne arenaria*, *M. floridensis*, *M. incognita*, *M. javanica*, and *M. mayaguensis* was investigated under greenhouse conditions. The studies indicate that 12 out of 22 weed species tested are good hosts of at least one of the five nematode species evaluated. Nine weed species (*Abutilon theophrasti*, *Amaranthus retroflexus*, *A. spinosus*, *Cnidoscolus stimulosus*, *Cucumis anguria*, *Dichondra repens*, *Ipomoea triloba*, *Leonotis nepetaefolia*, and *Phytolacca americana*) were good hosts for the five root-knot nematode species evaluated. The non-hosts of the five *Meloidogyne* spp. were *Cassia occidentalis*, *Crotolaria spectabilis*, *Dactyloctenium aegyptium*, *Desmodium purpureum*, *Digitaria sanguinalis*, *Panicum dichotomiflorum*, *Oenothera biennis*, *Setaria pumila*, and *Sorghum halepense*. *Echinochloa muricata* was a poor host for *M. are-*



naria and *M. incognita*, and non-host for *M. floridensis*, *M. javanica*, and *M. mayaguensis*. *Senna obtusifolia* was a good host for *M. mayaguensis*, but a poor host for *M. floridensis*, *M. incognita*, and *M. javanica*, and a non-host for *M. arenaria*. Additionally, in another greenhouse study, *M. mayaguensis* was able to infect and reproduce on four bell pepper cultivars: California Wonder, Charleston Belle, Keystone Resistant Giant, and Yolo Wonder.

Meloidogyne floridensis is a root-knot nematode pest of peach trees (*Prunus persica*) in Florida. Host tests to evaluate the response of agronomic crops to four populations of this nematode are in progress under greenhouse and field conditions. Studies are also initiated to determine the capability of *M. floridensis* to break the resistance of crops possessing nematode-resistant genes.

Meloidogyne partityla was recently found infecting pecan seedlings in a nursery in North Florida. Research is in progress to compare the morphological and molecular characters of this species with those of other root-knot nematodes common in natural areas of Florida, such as *M. christiei*. These studies will elucidate the phylogenetic relationship between these poorly studied root-knot nematodes.

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The studies on the morphological and molecular characterization of a cyst-forming nematode, *Afenestrata orientalis*, Kazachenco, 1990, are still in progress and are being conducted by Department nematologists in collaboration with the taxonomists of University of California, Riverside, and the California Department of Food and Agriculture, Sacramento. This research was prompted when this cyst-forming nematode was found in Florida in 2005. The morphological and phylogenetic relationships of this species with *A. koreana* (also occurring in Florida) are one of the objectives of this project.

Survey studies in the potato-growing areas of Florida were prompted when the pale potato cyst nematode (PCN) (*Globodera pallida*) was found in Idaho in April 2006. Department nematologists in cooperation with colleagues from USDA-APHIS and the Florida Cooperative Agricultural Pest Survey (CAPS) conducted this survey. Preliminary samples were collected in the previous fiscal year and sample collection intensified this fiscal year in the potato-growing areas of Collier, Lee, and Manatee counties. The results of this survey have important regulatory significance because states free of the regulated pale potato cyst nematode may be exempt from a ban on the export of potato tubers and other crops to countries regulating the potato cyst nematodes. So far, 136 samples have been processed. The results of the nematological analysis of these samples have not provided any evidence of the regulated pale and golden nematodes in the surveyed potato fields. The survey will be continued in the fall in potato fields of North Florida in Putnam and St. John's counties.

As mentioned above, the recent detection of *G. pallida* in Idaho and the subsequent find of *G. rostochiensis* in Quebec province, Canada, in August 2006, have intensified the interest of international

regulatory agencies in acquiring accurate information about alternate hosts for these two pests. Success of the USDA-APHIS-PPQ survey and eradication programs are based on a good knowledge of potato cyst nematode hosts. Weeds that are good hosts for PCN interfere with nematode control efforts by providing alternative sites for feeding and reproduction when potatoes are not present. Therefore, a study was initiated to obtain information on hosts of the potato cyst nematodes not currently reported in the literature and prepare an updated list of potato cyst nematode hosts based on previous lists available in the literature and field studies conducted in South America. Department nematologists are conducting this project in cooperation with a plant pathologist from the USDA-APHIS-PPQ-CPHST; National Weeds Management Laboratory, Fort Collins, Colorado; nematologists from the Potato Center (PROINPA), Cochabamba, Bolivia; Ministry of Agriculture of Chile in Santiago; and the Italian Council of Research, Bari, Italy.

The morphological illustration and description of a new lesion nematode infecting amaryllis (*Hippeastrum* sp.), in Florida were published in the European journal Nematology. This new lesion nematode was named *Pratylenchus hippeastris*.

Four studies on the host status, pathogenicity, and virulence of *Meloidogyne mayaguensis* to selected plant species important to Florida, including vegetable, ornamental, and weed plants, were completed and published in the international journals Nematropica and Nematologia Mediterranea. These studies were conducted in collaboration with scientists of the University of Florida and sponsored by the T-STAR grant, USDA-CSREES 2005-34135-15895.

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The guidelines for compost sanitation were completed and published as an environmental quality paper in the Proceedings of Soil Crop Science Society of Florida. Nematologists, plant pathologists, and environmental specialists of the Department in cooperation with a soil scientist of the University of Florida contributed to the preparation of these guidelines.

Plant Pathology

This fiscal year, the Plant Pathology Section saw several important initiatives -- which began with the introduction of major exotic plant pathogens and vectors -- evolve into long-term disease management plans with reasonable expectations of success. At no time has the Florida citrus industry faced so many simultaneous and different threats to its profitability and continuity. The challenging situation has inspired even stronger and more effective alliances between the Division of Plant Industry, UF-IFAS, and the USDA-APHIS-PPQ, and ARS to coordinate and fund the surveys, research, public outreach, and training programs vital to success.

The number of samples formally processed by the section and recorded in the database has continued to decline, a trend that has been apparent for several years now. Reasons for this trend are not clear, but two possibilities are the number and scope of emergency programs preoccupying Division of Plant Industry inspection personnel and better training of plant inspection staff so that plant problems can be dispatched without sampling. In spite of the lower sample submission rates, the number of telephone, email, and walk-in clients has been increasing steadily, though no system presently tracks these encounters effectively. The sample count in the Plant Pathology Lab was 2,573, and the citrus canker sample count was 3,257.

Citrus Health Response Program

The Citrus Canker Eradication Program, which was discontinued in January 2006, evolved into a progressive and versatile Citrus Health Response Program which monitors overall citrus health and recommends the latest pest management guides for the new pests that recently have become endemic in the state (particularly HLB and citrus canker). The Plant Pathology Section has participated in numerous industry training sessions and policymaking committees assisting all stages of the citrus production process from propagation to marketing. Despite formidable odds, pathogen- and pest-protected citrus nurseries are coming online and the fresh fruit component of the industry is still able to market fruit with relative freedom under carefully administered regulatory programs.



Supporting Florida Agriculture

Grading Out Canker-Blemished Fruit

Since canker is endemic in the state, to assist the Florida fresh citrus fruit industry, the Plant Pathology Section is cooperating on a USDA-TASC-funded project with UF-IFAS. This project is identifying better ways to grade out canker-blemished fruit on the packing line, quantifying risks of canker transmission associated with asymptomatic fruit in the marketplace, and ultimately simplifying the grove inspection process by detecting canker early to allow adjustment in management methods. One major outcome of the research has been the discovery that citrus fruit with canker blemishes is not a good source of inoculum to initiate disease. So far, outdoor experiments using badly blemished packinghouse-treated fruit have failed to initiate any canker disease on susceptible grapefruit plants in the immediate vicinity. No *Xanthomonas axonopodis* pv. *citri* cells have oozed out of the lesions during natural or artificial wetting events during the course of the long-term experiment. Inoculum escape from the lesions would be the first essential step for blemished fruit to transmit citrus canker. These experiments and other related projects will continue into the next fiscal year.

Wollemi Pine

In December 2006, the Plant Pathology Section helped a nursery in Parrish determine reasons for poor health in numerous *Wollemia nobilis* plants being grown under contract for National Geographic Magazine promotion. Wollemi pine was a presumed extinct plant recently rediscovered in a remote sandstone gorge in New South Wales, Australia. Because of some irregularities in the phytosanitary certification of the plants in their trip from Australia to Canada and then into the United States, and the apparent poor health of a large proportion

of the rooted cuttings in the Florida nursery, the future of the valuable plant material was in jeopardy. Division plant pathologists diagnosed the problems as simple horticultural mistreatment and gave recommendations that had the plant material returning to health in a short time. Though the nationally advertised National Geographic promotional program to distribute *Wollemia nobilis* plant material into the hands of skilled horticulturists around the world had to be delayed, very little of the plant material was lost, and the distribution went forward later. Wollemi pine may be near extinction in the wild, but its future is assured in conservatories and private gardens for now.

Infected Camellias

During the spring of 2007, *Phytophthora ramorum* was detected once again on containerized camellia shrubs for sale in a Tallahassee retail nursery outlet. The plants originated from other southeastern states. In previous years, this nursery has had problems with *P. ramorum*-infected camellias whose origins were traced to various southeastern states. A water-baiting study funded by the U.S. Forest Service (USFS) focused on the detection of *P. ramorum* possibly leaving the nursery site in surface drainage. The study commenced during late spring 2007 with the cooperation of the USFS, the Department's Division of Plant Industry, and Mississippi State University personnel. Water bait stations were set up in the watershed within the confines of and along the outside perimeter of the nursery in Tallahassee. *Phytophthora ramorum* was not recovered from the water baits. *P. ramorum* was recovered from the filtration samples, but it was concluded that this was the result of recontamination by infected camellias purchased wholesale and brought into the nursery, not because *P. ramorum* was established in the nursery or the surrounding environs.

Supporting Florida Agriculture

Orchid Ringspot Disease

A longstanding mystery ringspot disease of *Phalaenopsis* orchids has been resolved. The ringspots would appear during the cooler months of the year on greenhouse-grown plants, and then symptoms would disappear with the onset of warmer weather. The phenomenon, suggestive of a viral disease, has baffled orchid fanciers and pathologists for decades. Plants were unmarketable when symptomatic, and of questionable quality when asymptomatic. As it turns out, the symptoms are indeed virus induced, but not in the typical way. Apparently, two tospovirus, tomato spotted wilt virus and Impatiens necrotic spot virus, are capable of short-duration, local lesion invasion of this orchid genus. Presumably, thrips are playing a vector role. Studies are ongoing to determine if this phenomenon is totally explained or perhaps the viruses do become systemic and are suppressed to the point of being undetectable at certain times of the year.

Watermelon Vine Decline

The watermelon vine decline disease reported in the last annual report has been determined to be caused by the whitefly-transmitted squash vein yellowing begemovirus (SqVYV). A team of scientists from the Division of Plant Industry, UF-IFAS, and USDA-ARS jointly discovered the new virus. Watermelon vine decline has been plaguing Florida watermelon growers since 2003. The virus causes vines to collapse and die just before the crop is ready to harvest. The virus infects other Cucurbitaceae, but causes much milder disease symptoms in them.

Ornamental Flower Virus

Another virus new to Florida was discovered infecting the ornamental flower *Ammi majus*, a member of the Apiaceae plant family. The new potyvirus is called Apium virus Y. This virus was originally reported in Australia, then later in New Zealand. The diagnostic work was a joint effort between the Division of Plant Industry and USDA-ARS.

Watermelon Virus

Still another new virus emerged in watermelons from the Immokalee area in the spring of 2007. This virus is called cucumber leaf crumple begemovirus, and represents yet another in the continuing parade of new whitefly-transmitted viruses showing up worldwide. In this instance, the diagnostic work was a cooperative effort between the Division of Plant Industry and UF-IFAS.

Other Viral Plant Diseases

Three other developments in the realm of viral plant diseases:

- A new potyvirus infecting *Passiflora incense* was found. It is in the bean common mosaic virus group, and has been tentatively named *Passiflora chlorosis* virus.
- A report on the newly discovered infection of the cardboard cycad (*Cycas furfuracea*) by tobacco ringspot virus was published.
- A report on the infection of the invasive noxious weed tropical soda apple (*Solanum viarum*) by Bidens mottle virus was published.

Supporting Florida Agriculture

Gladiolus Rust

The gladiolus rust pathogen, *Uromyces transversalis*, is an autoecious rust of quarantine significance infecting several genera in the Iridaceae. It has long been on lists of exotic pathogens threatening U.S. agriculture. Both the pathogen and the main host (*Gladiolus x hortulanus*) are native to southern Africa. After reaching the Western Hemisphere via South America in the early 1980s, Martinique in 1996, and central Mexico in 2004-2005, gladiolus rust premiered in Florida in April 2006. An interception of commercial Florida cut flowers in Hawaii prompted the discovery by trace-back. Rust was confined to two commercial farms in Manatee and Hendry counties, and in nearby residential gardens at the Manatee County site. In May 2006, gladiolus rust (GR) was also discovered in San Diego County, California. Efforts to contain and eradicate the pathogen included: applications of triazole and strobilurin fungicides, taking precautions in the packinghouse to ensure no foliage with rust was packed, roguing and early removal of the crop and all volunteer plants, conducting prolonged area-wide surveys, and host-free periods during the summer to reduce or eliminate live inoculum. Despite these efforts, GR reappeared at the Manatee County site in February 2007 and at the Hendry County site about one month later. The pathogen also reappeared in San Diego County in June 2007. A national management plan for exclusion and eradication drafted by USDA Emergency and Domestic Programs continues to provide the framework to minimize the impact of gladiolus rust in the United States.

New Fungal Pathogens

Three new fungal pathogens were discovered in Florida for the first time:

1. *Chionomyces meliolicola* was detected hyperparasitizing a Meliolales (one of the plant parasitic "black mildews") on an unidentified palm in September 2006.
2. *Pseudocercospora costina* was found causing leaf spots on a *Costus* plant in October 2006.
3. In December 2006, a sample of *Pachysandra terminalis* was submitted with *Gliocephalotrichum bulbilum* infecting the stems.

Foliar Pathogen of Citrus

At the 2006 International Conference of Plant Bacteriology in Edinburgh, Scotland, a poster was presented on the newly discovered opportunistic foliar pathogen of citrus, *Burkholderia andropogonis*. Distinguishing this strictly wound-aided pathogen from the bacterial citrus canker pathogen in field surveys is critical for disease management planning. A second poster presented at the conference gave an update on the recent discovery of huanglongbing in Florida.

Immunostick Testing

The citrus canker diagnostic team performed validation testing for a new Immunostick® product manufactured by Agdia. The diagnostic tool can rapidly detect antigens of the citrus canker pathogen from crushed lesions. The sticks are currently being utilized by USDA personnel that oversee citrus packinghouse fruit graders. International trading partners now recognize the tool as an accurate and quick field diagnostic method for citrus canker.

Supporting Florida Agriculture

Plant Pathology Specimen Tracking

The long-awaited Plant Pathology Specimen Tracking (PPST) database was unveiled late in the fiscal year. The database modernizes the old SMART database that had served reasonably well since 1984. The new system provides a much richer synopsis of each specimen, including records of all diagnostic tests with comments, pictures from the field and in the lab, and literature references used in the diagnostic process. It also allows emails of the completed diagnosis to all interested parties. The database compilation of disease records will constitute an online, continuously updated pathogen and host index, replacing the hard copy, "Diseases and Disorders of Plants in Florida."

Cooperative Agricultural Pest Survey Program

The Florida Cooperative Agricultural Pest Survey (CAPS) program comprises the largest CAPS program in the nation. Staff includes a State Survey Coordinator, three Pest Survey Specialists, a GIS Specialist, a Public Information Specialist, a Molecular Diagnostician, a Laboratory Technician, four USDA Pest Survey Specialists, and an Entomology Domestic Identifier. The CAPS team was involved in a number of key surveys and initiatives throughout the state during fiscal year 2006-2007.

Florida's agricultural community and citizens were made more aware of exotic pests through CAPS web pages, a traveling tabletop exhibit, public outreach door hangers, posters and brochures, flyers, online survey reports, and computer desktop calendars. Surveys were greatly enhanced by GIS mapping production of aerial and digital maps downloaded to PDAs and ARCPad applications.

A potato cyst nematode survey initiative began in April 2007. According to the national protocol, 10 percent of commercial potato fields in each county are to be randomly sampled. By the end of the fiscal year, the CAPS team had sampled approximately 18 percent of the commercial potato fields in Florida and had plans to survey the remaining fields in the fall. As of June 30, 2007, over 5,000 acres were surveyed and 171 soil samples taken. Over 3,000 plant-parasitic nematodes in two orders, eight families, and 14 genera have been recorded and no nematodes of regulatory concern, including PCN, have been found.

The CAPS team was the first group in Florida to begin surveying for red palm mite (RPM). The RPM surveying initiative began in October 2006 and will continue for the foreseeable future. Over 600 sites have been surveyed in Central and South Florida, and over 140 mite samples have been sent to Gainesville for identification. Over 50 species of mite were identified belonging to 19 families. Sentinel sites have been established in 11 counties, and pest survey specialists continually survey for RPM in nurseries, residential areas, and in "hot zones" such as marinas and maritime ports. The red palm mite was intercepted by CAPS personnel at a palm nursery on coconut seeds imported from Jamaica. This was the first nursery interception in the state.

CAPS, in cooperation with USDA-APHIS-PPQ and the Division of Plant Industry plant inspection personnel, responded to reports of the exotic snail *Granodorus lima* being intercepted on crushed cars from Puerto Rico. Several surveys were carried out at the port of entry in Jacksonville, and three exotic snail species, including *G. lima*, were found on crushed cars awaiting shipment to the scrap yard. This led to further surveys at the scrap yard, where several dead *G. lima* were discovered.

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These surveys led to talks with the exporter and companies shipping the crushed cars from Puerto Rico. The suggestions made by CAPS and USDA-APHIS-PPQ resulted in the exporter investing in machines that clean large pieces of equipment before sending them to the United States. These changes have led to a huge drop in the number of exotic snail interceptions at the port.

A CAPS cotton commodity survey in the Florida Panhandle was carried out in October 2006. During this two-week survey, 28 samples were collected and submitted, but no targeted pests were detected. Targeted pests included cotton stainers (*Dysdercus* sp.), cotton seed bug (*Oxycarenus hyalinipennis*), and passionvine mealybug (*Planococcus minor*). Pest survey specialists surveyed a total of 12 sites in five counties (Escambia, Walton, Washington, Jackson, and Calhoun). Twelve locations were visited. Acreage inspected was 1,159 acres.

In recent years, the identification of several invasive species that threaten trees of natural resource and agricultural significance in the United States, together with Florida's ideal environmental conditions and extensive international ports of entry, has prompted the Florida CAPS program to begin monitoring and evaluating the current situation. Species of concern associated with solid-wood packing materials have begun within a 5-to-10-mile radius of Florida's major international maritime ports and airports to determine if species of concern have established in nearby environs. This initiative is planned to continue for an unspecified length of time because the constant year-round arrival of solid-wood packing materials is associated with many different commodities.

Domestic Security and Emergency Preparedness

The Department continues to work diligently to assure that Florida's agricultural resources are safe from terrorism and prepared for all types of disasters. The Office of Agricultural Emergency Preparedness, established shortly after the terrorist attacks of 2001, coordinates with all of the Department's divisions and offices to assure that our diverse programs are consistent, integrated, and equipped for success.

Employee training and preparedness was again a top priority during the 2006-2007 fiscal year. Following a mandate from the U.S. Department of Homeland Security, nearly 1,700 Department employees have completed more than 3,300 federally approved courses, assuring that the Department remains compliant with the federally mandated National Incident Management System (NIMS). Through these courses, employees have enhanced their capabilities to effectively communicate and seamlessly integrate with local, state, and federal partners in response to emergencies. Additionally, more than 500 Department employees have completed an online training course titled "Fighting Agricultural Terrorism in Florida: Domestic Security Awareness Basics for FDACS Inspectors and Staff." This course, designed by Department technical experts under the leadership of the Office of Agricultural Emergency Preparedness, teaches employees how to recognize potential terrorist threats to agriculture and how to appropriately report suspicious activity.

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Because of strong partnerships and mutual respect between the Department and local, state, and federal agencies, Florida continues to be a national leader in the amount of federal homeland security funding used for the protection of food and agricultural systems. More than \$2.1 million in Department of Homeland Security Grant Funding, and \$350,000 in Centers for Disease Control and Prevention Bioterrorism Funding, was used to support key Department initiatives during the 2006-2007 fiscal year. This federal funding was utilized for technological advances at Agricultural Interdiction Stations (Office of Agricultural Law Enforcement), training and support for All-Hazard Incident Management Teams (Division of Forestry), laboratory enhancements (Divisions of Agricultural Environmental Services, Animal Industry, Dairy Industry, and Food

Safety), and continued support of the State Agricultural Response Team (led by the Division of Animal Industry).

Inter-agency information sharing continues to improve in Florida. During the course of the year, Office of Agricultural Emergency Preparedness and other Department staff worked with Department of Homeland Security and state law enforcement partners on two important programs, the Florida Homeland Security Information Network and the Florida Fusion Center. Both of these programs are designed to rapidly share critical information with all-discipline partners and have incorporated the needs and interests of Florida's agricultural partners.



Promoting Florida Agriculture



Florida Agricultural Promotional Campaign

The Florida Agricultural Promotional Campaign (FAPC), commonly referred to as “Fresh from Florida,” is a membership program designed to boost the image of Florida agriculture and increase sales by helping consumers easily recognize Florida agricultural products at the wholesale and retail levels. There are two levels of membership – paid and non-paid. For paying members, there is a \$50 annual fee. This category includes producers, packers, repackers, processors, brokers, shippers, co-ops, agriculture supporters, and industry associations/organizations. Non-paid members include retailers, food service, not-for-profits, wholesalers, and educational and governmental organizations.

The Department’s Division of Marketing and Development has been working for more than 17 years to develop marketing strategies to assist in the promotion of Florida agricultural products both domestically and abroad. These efforts have led to increased sales and public awareness of Florida’s agricultural industries, and their vital importance to the state’s economy.

FAPC features a variety of “Fresh from Florida” logos that promote Florida-grown fruits, vegetables, seafood, horticulture, viticulture, organic, apiary, livestock, and other specialty and dairy products. In addition to commodity- and type-specific logos, the Department has created logos for international buyers and consumers. These include “from Florida” for value-added products and “from Florida USA.” Logo usage automatically ties FAPC members into inclusive media advertising touting Florida agricultural products.

Supporting Florida Agriculture

Florida Agricultural Promotional Campaign (FAPC) Magazine

The FAPC magazine is published twice a year. This publication promotes Florida's agricultural industry through FAPC-member feature articles, industry-sponsored events, recipes, and articles for better nutrition from the Department's executive chef, and through educational information that relates to Florida's present and next generation of farmers. The magazine is distributed to the current FAPC member list, national and international produce and seafood buyers, attendees at trade events, and other agribusiness industry professionals.

A yearly directory is published and mailed with the second issue of the magazine. This directory provides information about FAPC companies, which include producers, wholesalers, retailers, processors, brokers, shippers, packers, educational organizations, and re-packers.

"Florida Agri-Journal"

The "Florida Agri-Journal" is a monthly publication that reaches more than 9,000 Florida agricultural producers, businesses, and educators. Subscribers to this periodical also include Florida Senate and House Agriculture Committee members, members of Florida agricultural associations, and State Farmers' Market tenants.

The information contained in the "Florida Agri-Journal" enables Florida agricultural producers to make informed risk-management decisions regarding their operations. It provides them with information about timely risk-management tools, including production management, financial risk solutions, disease management practices, pest mitigation, market-

ing information, and crop insurance. Some data is directed to specific crop producers, while other data is broad based and of value to a wider audience. Special features include editorial illustrations, trade leads, events, retail trends, and international marketing data.

Retail Campaigns: Global Grid, Farmer's Express, Fresh from Florida Watermelon

The 2006-2007 retail campaigns, "Global Grid," "Florida Farmers' Express" and the "Fresh from Florida Watermelon Campaign," saw an increase in participating grocery stores, an expanded geographic area, and an increase in the number of advertisements. The marketing promotions, which ran from November 2006 to June 2007, coincide with Florida's important winter-spring harvest that supplies the United States with most of its domestically grown produce.

Now in its sixth year, Global Grid included 9,277 stores and generated \$397.5 million in additional retail sales. Florida Farmers Express campaign, now in its seventh year, included 1,699 stores and generated \$103.3 million in additional retail sales. The Fresh from Florida Watermelon Campaign, now in its fourth year, included 4,017 stores and generated \$43.5 million in additional retail sales.

These three marketing campaigns spanned 43 U.S. states, the District of Columbia, five Canadian provinces, England, Scotland, Wales, and 11 Caribbean and Central American countries. Forty-one retail grocery chains with 14,993 individual stores participated. They featured Florida products in their circular ads 877 times, yielding 329,811 individual store ads that generated more than 12.9 billion consumer impressions. The three successful

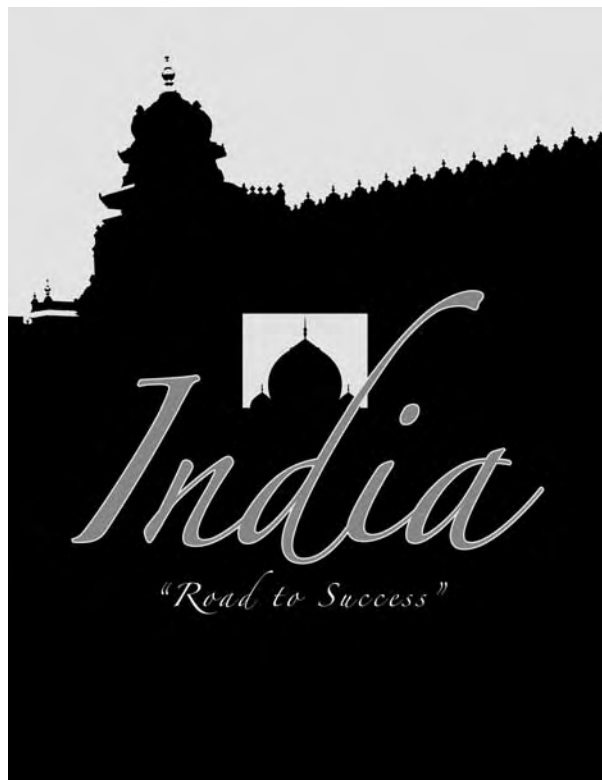
Promoting Florida Agriculture

marketing initiatives were joint ventures between the Division of Marketing and Development and the Florida Watermelon Association.

India Research Project

A market research study was conducted in the north, south, east, and west regions of India and was orchestrated in two phases by marketers in November 2006 and January 2007. The project examined economic growth, expansion of the retail and grocery sectors, and trade barriers. Valuable consumer information was gathered from more than 1,500 individual surveys.

India continues to rapidly modernize. Historical 7 percent gains in gross domestic product are fueling an expansion in a numbers of affluent consumers.



These buyers are driving the imports and sales of a variety of international products. The region is now being touted as the “New China,” and continued easements of trade barriers and tariffs will assist 200 to 300 million affluent Indians as they purchase foodstuffs from around the globe.

The “Pathway to India” Report will be published in September 2007 for use by Florida’s agricultural exporters and will provide a cross section of pertinent information designed to enhance insight into the region and assist with sales opportunities for Florida’s agricultural industry.

Surveys and Research

A variety of research projects are conducted annually which deal with consumer preferences, operations intelligence, product development, client requests, and market testing programs.

The bureau has developed internal expertise in designing and implementing survey instruments, compiling findings, and producing executive reports and summaries. Numerous studies have been conducted not only in the United States but also in international markets, including Canada, the United Kingdom, and India.

Surveys and focus groups are routinely incorporated into studies to gauge consumer and product acceptance levels, expand insight into the market, and clarify the most effective approaches to advertising and information campaigns.

These efforts assist a cross section of agricultural partners and industries. The collection of intelligence helps us gain insight into unknown markets. This research helps to determine the risk and feasibility of launching products into new areas.

Supporting Florida Agriculture

Ethnic Marketing Campaigns

The Division of Marketing and Development continues to educate African Americans and other minorities about the major health factors that affect them and help provide the tools to combat obesity and other obesity-related illnesses. This health initiative encourages daily exercise and the increased consumption of fresh fruits and vegetables. In 2006-2007, the campaign took on a new challenge as the Department partnered with the National Football League (NFL) to promote healthy lifestyles to South Florida residents during Super Bowl XLI. The “Super Bowl XLI Kickoff to Better Health” campaign involved four community programs and media and retail partners throughout Miami-Dade, Broward, and Palm Beach counties. Individuals who either attended events or visited the official “Super Bowl XLI Kickoff to Better Health” web site were able to enter a contest to win tickets to Super Bowl XLI.

The division is also reaching Florida’s Hispanic community through its “Fresco de la Florida” campaign. This targeted program stresses the health benefits gained by increasing consumption of “Fresh from Florida” fruits and vegetables. Marketing staff promoted the healthy lifestyle message to the growing Hispanic population in Florida through major cultural celebrations and historic events throughout the state, such as Miami’s Carnival on the Mile and Fispal-Taste Latino 3 food show. Attendees at all of the events were provided Spanish-language information and nutritional facts about fresh Florida fruits and vegetables, as well as recipes for use in traditional Hispanic meals.

The Hispanic Campaign promotes Florida agriculture to Latin American countries by participating in Hispanic food shows, utilizing media advertising in Latin America, and offering marketing incentive

programs to retailers in Central America and the Caribbean. Through major print, television, and radio outlets, the message of “Fresco de la Florida” is reaching these populations. Further, this message encourages the Hispanic community to maintain a healthy weight and improve prenatal care by adding fresh Florida fruits and vegetables to their menu.

Culinary Promotions

Award-winning chef Justin Timineri serves as the culinary ambassador for the State of Florida. His job is to support Florida’s agriculture industry by creating modern-style dishes that reflect Florida’s diverse population, and by conveying the benefits of eating “Fresh from Florida” products. As part of the “Fresh from Florida” marketing campaign, Chef Justin’s responsibilities include promoting Florida’s freshest commodities by creating new recipes, attending trade events, performing cooking demonstrations, and educating children on the value of health and nutrition. His philosophy on food is a simple one: “Cooking should always be fun, simple, and flavorful.”

As Culinary Ambassador, Chef Justin represented Florida at the 2006 Great American Seafood Cook-off in New Orleans along with the Governor’s Executive Chef, Josh Butler. They prepared recipes that featured a variety of Florida products. Chef Justin was named the winner of the annual, prestigious competition, which was aired on the Food Network, and Florida agriculture received national media attention.

Promoting Florida Agriculture



“Xtreme Cuisine” Cooking School

With the number of overweight and obese youth climbing each year, health and fitness issues are at the forefront of today's news. Florida agricultural education initiatives have addressed these issues. For the third year, the Department conducted the “Xtreme Cuisine” Cooking School, teaching Florida students how to make their own healthy snacks using “Fresh from Florida” fruits and vegetables, whole grains, lean meats, and other nourishing recipe ingredients. Under the supervision of Department Chef Justin Timineri, students learned the basics of food preparation while creating fruit parfaits, whole-wheat pizzas, and other easily prepared snacks. Classes were held during April and May – traditionally the last months of the school year – at middle schools in Tampa, Miami, Ocala, and Tallahassee.

In addition to in-class sessions, the Department coordinates a “Train the Trainer” program with the Florida Farm Bureau. These workshops provide the training and resources that allow employees and volunteers with Florida Farm Bureau offices, Florida County Extension Offices, and both public and private school employees and volunteers to coordinate Xtreme Cuisine classes in their communities. Thirty-seven Xtreme Cuisine classes are scheduled or have already been implemented in Broward, Flagler, Hillsborough, Lafayette, Liberty, Putnam, Orange, and Seminole counties.

Supporting Florida Agriculture

Fresh from Florida and Sprint Kids

As part of its ongoing campaign to promote healthy eating and exercise among young people, the Department sponsored “Sprint Kids” at seven events throughout Florida. This program is part of the Family Fitness Weekend Sports Event Series, which provides an excellent venue to promote the message of healthy eating and exercise and helps consumers understand that a healthy lifestyle starts at home. Children are asked to swim, bike, and run – just like their parents – only on a much shorter course. These events encourage families to participate together in physical activities and teach children that nutritious foods grown by Florida farmers are an important foundation for a lifetime of good health.

The Department’s “Fresh from Florida” message appeared on the SUN Sports Network during the competitions. In addition, a full-page, full-color ad promoting healthy eating and fresh Florida fruits and vegetables was published in Inside Exclusive Sports magazine and online at www.familyfitness-weekend.com.

Another component included partnering with Publix Supermarkets. Publix has included the “Fresh from Florida” message in its weekly advertising inserts, in the summer issue of Publix Family Style magazine, in the Publix Preschool Pals e-newsletter, and on point-of-purchase displays in its stores.

Cattle Trade Missions

The Department continues to attract international cattle buyers through trade and reverse trade missions. Florida’s beef cattle breeds are well suited to many areas of South and Central America because they show little or no effects from extremely high



temperatures. These cattle are environmentally adapted to tropical and subtropical climates, making them highly desirable to cattlemen from countries with similar climate conditions.

During fiscal year 2006-2007, the division organized two beef cattle trade missions through the U.S. Livestock Genetics Export, Inc. (USLGE), a cooperator with the U.S. Department of Agriculture. These missions included trade missions to Costa Rica and Colombia.

In Costa Rica, representatives from the Department, the USDA Agricultural Attaché office, and the University of Florida held a one-day seminar for local cattlemen on cattle management practices in the tropics. The delegation also visited local ranches and discussed the benefits of Florida livestock genetics. This program gives foreign buyers of Florida cattle the ability to plan, control, and adopt management strategies to ensure that the Florida cattle they purchase will produce more beef more efficiently.

Promoting Florida Agriculture

The Department traveled to Medellin, Colombia, with a Florida cattle industry representative for the World Brahman Congress. This event is held every two years in a different country and attended by thousands of cattlemen from all over the world.

Representatives from Florida traveled to David, Panama, in March to meet with cattlemen during the Expica cattle show, one of the largest cattle shows in Central America. In addition to meeting with cattlemen from throughout Latin America, the delegation inspected ranches, a pineapple processing facility, and a hog farm.

During these trade missions, the Department has been evaluating potential participants for Florida reverse trade missions, with the focus on selling Florida agricultural products. These contacts provided invaluable opportunities to gain direct marketing knowledge and promote the Florida beef cattle industry.

Thoroughbred Horse Missions

Florida horses have long been prized in North American racing circles for their superb quality. Florida is home to some 600 Thoroughbred farms and training centers, with more than 75 percent of these located in the Ocala/Marion County area. Florida Thoroughbred farms, training centers, breeding, and racing stock create an economic impact estimated at \$1 billion annually.

Trade contacts initiated by the Department have produced more than \$3 million in Florida horse exports. More sales are expected as Florida marketing representatives continue to facilitate trade missions with foreign buyers. The division sent an equine trade mission to Italy and conducted four reverse trade missions for delegations from Korea,

Italy, and Canada. These missions were co-hosted by the Florida Thoroughbred Breeders' and Owners' Association, with the purpose of enlightening or further educating foreign buyers on the quality and value of Florida's equine industry.

Reciprocal visits from contacts made during the Italian mission are scheduled for August 2007 and April 2008 horse sales. Past mission attendees from Korea, Italy, Mexico, Canada, and Britain are expected to return during those times.

Seafood and Aquaculture Marketing

The Department's Bureau of Seafood and Aquaculture Marketing provides marketing strategies for Florida's seafood and aquaculture industry to facilitate buying, selling, and the promotion of Florida seafood and aquaculture products. The mission of the bureau is to market Florida products to consumers and help the seafood and aquaculture industry increase sales.



Supporting Florida Agriculture

The bureau produces educational materials for consumers. It provides promotional materials, supplier directories, and training on handling and storage safety for retailers, foodservice professionals, wholesalers, and processors. The bureau provides educational and technical support and training for fishermen, aquaculturists, retailers, and foodservice professionals. It serves as a liaison for aquaculturists, commercial fishermen, government agencies, and the consuming public by utilizing the expertise of industry advisory councils. The bureau provides public relations to the media on behalf of the seafood, aquaculture, and marine life industries. It also provides marketing services, including electronic marketing programs identifying U.S. and international buying and selling operations. It assists and promotes Florida industry through the distribution of recipe brochures and educational materials to visitors at seafood festivals throughout the state and at industry trade events, domestically and abroad.

The Department is committed to serving seafood and aquaculture audiences with integrity and professionalism to increase the industry's sales and profits through global marketing and education. Activities of the Bureau of Aquaculture and Seafood Marketing generated 293 million consumer impressions nationwide with a sales value of approximately \$12.8 million. Chief among the audiences served by the Department are:

- Consumers seeking information to wisely purchase, prepare, serve, and store seafood and aquaculture products. The Department reaches consumers by means of printed materials, news releases, and public service announcements through television, radio, print media, and appearances at regional seafood festivals.

- Producers (fishermen, processors, and aquaculturists) turn to the Department for technical, educational, marketing, and promotional assistance, as well as safety, handling, and storage information. Florida fishermen and processors took advantage of marketing and promotional opportunities to sell their products. The Department's marketing and promotional programs use the "Fresh from Florida" logo and are backed by a multilevel campaign creating consumer awareness and interest and fueling demand for Florida products.

Consumer Education



TV Consumer Shows

Bi-weekly guest appearance at Tallahassee's CBS affiliate included staff preparing Florida seafood and other agricultural products. These culinary segments featured recipes touting the many health benefits of seafood and the ease of cooking fresh Florida seafood at home. Seasonal segments were also broadcast on Florida Christmas trees; seafood and aquaculture coloring and activity books for children; and decorating with Florida fruit and greenery.

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Seafood and Aquaculture Festivals

Sebastian Clambake Lagoon Festival: Bureau representatives greeted clam lovers at the Sebastian Clambake Lagoon Festival on November 3-5, 2006, and provided Florida aquaculture information and clam and other seafood recipe brochures to an estimated crowd of 45,000. With production beds located just offshore in the Indian River, the area is home to many of Florida's clam farmers. The festival focuses on the importance, past and present, of the Indian River Lagoon to the Sebastian River area. It also highlights the local seafood that has sustained the area's residents for generations.

Cedar Key Seafood Festival: Fifty-thousand people celebrated Florida's seafood bounty October 21-22, 2006, in Cedar Key. The Bureau of Seafood and Aquaculture Marketing had an exhibit at the festival.

Staff talked to participants and distributed Florida seafood recipe brochures to the 50,000 people in attendance.

Fernandina Isle of 8 Flags Festival: Staff exhibited at this three-day event, May 3-6, 2007, providing attendees with information and several shrimp recipe brochures. Fernandina Beach, the birthplace of the modern shrimp industry, celebrates wild-caught shrimp and shrimp industry history each year with this festival that attracts 125,000 consumers.

Other seafood festivals: The bureau also exhibited and distributed recipe brochures at the Apalachicola Seafood Festival (16,000 attendees), November 4; Clamerica Festival (5,000 attendees) in Cedar Key, July 4; the Cortez Fishing Festival (18,000 attendees), February 17-18; and the Panacea Blue Crab Festival (6,000 attendees), May 5.



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Other Events

Springtime Tallahassee: The Bureau of Seafood and Aquaculture Marketing participated in a Fresh from Florida Seafood Festival in conjunction with the 39th Annual Springtime Tallahassee Grand Parade and Jubilee. The event was held March 31, 2007, in Downtown Tallahassee. Local seafood vendors showcased Florida seafood products. Bureau employees staffed a booth distributing recipe brochures, magnets, and other promotional items. Executive Chef Justin Timineri, the 2006 Great American Seafood Cook-off Champion, was on hand with tasty samples of seafood ceviche. More than 200,000 attended the event.

Super Bowl XL Benefit: Wild Florida shrimp was a “superstar” at the Taste of the NFL Super Bowl XL benefit in Detroit February 4, 2006. With shrimp provided by the Florida shrimp industry, Florida chef Allen Susser prepared one of his signature wild Florida shrimp entrees for a crowd of 2,800 Super Bowl guests, sponsors, volunteers, and community leaders. Recipe handouts with the featured recipe, “Wild and Wonderful Florida Shrimp” information, the “Ask for Florida Shrimp” logo, and the Wild Florida Shrimp web address were provided by the bureau to attendees.

South Beach Wine and Food Festival: Florida chef Allen Susser rocked at this festival in Miami Beach, February 26, 2007, by preparing a Florida rock shrimp recipe. A crowd of 5,000 got the message “buy wild-caught Florida shrimp” while being treated to a delicious wild-caught shrimp dish. Colorful flyers complete with Chef Allen’s recipe, Florida wild shrimp information and the “Ask for Florida Shrimp” logo were provided by the bureau to attendees.

Epcot International Food and Wine Festival: The

bureau participated for the fourth straight year in the annual Epcot International Food and Wine Festival, September 29 through November 12, 2006. Wild-caught Florida shrimp was the featured menu item at the “Fresh from Florida” kiosk prominently placed on the Epcot promenade. Guests received Florida seafood recipes and other promotional brochures. The Epcot International Food and Wine Festival is one of the largest gatherings of domestic and international visitors in the country with over 1.3 million guests during the 2006 festival. Florida residents accounted for 20 percent of the festival goers.

Monterey Aquarium’s Cooking for Solutions 2007: Wild-caught Florida shrimp were showcased by Florida’s Allen Susser of Chef Allen’s, Miami. Chef Allen Susser was sponsored by the Florida Department of Agriculture’s Bureau of Seafood and Aquaculture Marketing to promote wild-caught Florida shrimp. He prepared one of his signature Wild Florida Shrimp recipes for attendees. This was the sixth year Cooking for Solutions brought together noted chefs to serve as ambassadors for sustainable dining.

The Great American Seafood Cook-Off: The Department and the Gulf and South Atlantic Fisheries Foundation sponsored Chef Justin Timineri at this event where chefs representing 20 coastal U.S. states squared off for the King of Seafood crown. Chef Justin took top honors and brought home the title with his recipe that featured some of Florida’s all-time favorites – snapper, shrimp, tropical fruit, and citrus. Chef Justin is the Department’s Chef and Culinary Ambassador. This competition takes place each year to spotlight the ease of preparation, good taste, and nutritional benefits of seafood. Chef Justin Timineri’s “Crispy Pan Seared Florida Snapper with Passion Fruit Cream and Florida Citrus Salad with Florida Gulf Shrimp and Spicy Green

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Mango Jam” creation was chosen by a panel of six judges as the best new domestic seafood dish that reflected the chef’s home state.

Recipe and Educational

Eight new recipe brochures were produced with updated recipes, educational information, and photos. These new consumer brochures include more information about each finfish or shellfish species, nutritional values, health and mislabeling advisories, and buying, storing, safe handling, and cooking tips.

Public Relations

The Bureau of Seafood and Aquaculture Marketing public relations team continued to focus on increasing the sale of Florida seafood to consumers through a variety of approaches, including media coverage, event participation, promotional material distribution, and two informational web sites, www.FL-Seafood.com and www.WildFloridaShrimp.com. These activities produced over 75 million consumer impressions with an ad value of over \$161,000.

Industry Marketing Assistance

Fishery Trade Leads

Leads from companies seeking fishery products, obtained from the National Marine Fisheries Service, the United States Department of Agriculture’s Foreign Agriculture Service, and from foreign and domestic companies, are then compiled by the bureau and distributed to over 188 Florida seafood and aquaculture companies by email and fax. Trade lead recipients reported 19 new customers, 60 new prospects, and sales totaling \$490,000 resulting from these leads.

Trade Events

International Boston Seafood Show: One of the top trade seafood events is the International Boston Seafood Show, which attracts almost 18,000 seafood and aquaculture buyers from around the world. To assist in matching these buyers with Florida companies the bureau coordinated a Florida pavilion. The pavilion provided a high-profile, eye-catching means for seven companies and the Gulf and South Atlantic Fisheries Foundation to present and promote their products. Participants reported sales of \$3.2 million and anticipate future sales of \$11.9 million.



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European Seafood Expo: The bureau also coordinated, on the behalf of the Southern U.S. Trade Association, a Southern U.S Seafood pavilion at the European Seafood Expo in Brussels, Belgium. This is the largest seafood only show in the world and attracted buyers from 77 countries. Participating companies reported sales at the show of \$2.5 million and anticipated future sales of \$13.25 million as a result of this event.

Asia Events: Bureau staff also coordinated, on behalf of SUSTA, Southern U.S. seafood pavilions at the China Fisheries and Seafood Expo in Qingdao, China, and the Busan International Seafood and Fisheries Expo in Busan, Korea. Participating companies at these two trade events reported sales of \$.75 million as a direct result of their participation in these events.

“Sea Notes” Industry Newsletter

The Bureau of Seafood and Aquaculture Marketing constantly searches for new and innovative ways to highlight activities and opportunities available for industry. In order to maintain communication with the Florida seafood and aquaculture industry, the bureau developed “Sea Notes.” Sea Notes is an electronic newsletter distributed quarterly to seafood restaurants, retail markets, wholesalers, and other seafood allied industry members. The newsletter showcases the Bureau of Seafood and Aquaculture Marketing’s promotional efforts and provides timely Florida seafood industry news. Sea Notes notifies recipients of opportunities for industry to be involved in marketing activities coordinated by the bureau.

Promoting Seafood and Aquaculture on the World Wide Web

The bureau’s two web sites, www.FL-Seafood.com and www.WildFloridaShrimp.com, provide consumers, Florida’s seafood and aquaculture industry, retailers, and the press with many downloadable seafood and aquaculture-related brochures, point-of-purchase materials, videos, audio files, and press releases. The web sites had 873,691 documented viewers during fiscal year 2006-2007.

For consumers, the web sites features: Florida seafood recipes; nutritional information about seafood; information about 28 popular Florida seafood species; oyster safety information; calendar of Florida seafood festivals; tips for handling, storing, and cooking seafood; a list of retailers and restaurants across the state that feature Florida seafood; history of Florida’s coastal fishing communities; and a list of suppliers of finished alligator leather products.

This year a special web page was added that focuses on product substitution. Information is included on this page regarding the legal issues, suggestions on how to differentiate grouper from a substitute, and how and where consumers can file a complaint if they suspect a product may be something other than what it is advertised as.

For wholesalers and retailers, the web site provides convenient on-line order forms for promotional materials, research and educational information on food safety and handling, trade leads, seafood advisories, and the Sea Notes newsletter.

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Photo Library

The bureau has taken many photos of plated and raw seafood species this year in an effort to expand and update its photo library. These photos are available to industry and media for publication purposes and to garner publicity for the Florida seafood and aquaculture industry.

Bureau of Education and Communication

The Bureau of Education and Communication is responsible for educating and informing consumers through news releases, brochures, and other

publications, exhibits and displays, graphics presentations, the Internet, broadcast, and other media. Bureau productions are integral to many projects that are part of the Florida Agricultural Promotional Campaign (FAPC), a program that assists the state's agricultural producers in expanding markets and promoting and selling Florida-grown products. In addition to its role within the Division of Marketing and Development, the bureau also produces numerous projects for other divisions throughout the Department.

During fiscal year 2006-2007, the bureau issued more than 160 press releases to inform the public about various regulatory and promotional activities of the Department. The bureau also responds to inquiries from the public and mails out publications upon request. More than 7,320 publications were mailed in response to over 969 individual requests received via the Division of Marketing and Development's web site www.Florida-Agriculture.com.

Florida Market Bulletin

The Florida Market Bulletin is a primary vehicle for keeping Florida's farming community informed of issues affecting the state's agriculture industry and the Department. This agricultural newspaper has been published regularly by the Department since 1917, and is currently available in printed form and on the Internet. In addition to disseminating agricultural news and information, the monthly Florida Market Bulletin provides a forum by which Florida residents can advertise to buy or sell agriculture-related items through its classified advertising section. During the 2006-2007 fiscal year, 5,478 classified ads appeared in the Market Bulletin. Monthly circulation averaged 11,188.

Supporting Florida Agriculture

Video and Radio

The bureau produces and disseminates audio and video productions such as television and radio public service announcements, radio programming, agricultural producer assistance videos, informational/promotional videos, documentaries, and training videos. Major projects produced during the fiscal year included:

- Radio public service announcements explaining the severe threat of wildfire and urging residents to burn safely.
- Four 60-minute episodes of “The Florida Report” that explain the Department’s agricultural support functions and highlight the practices of various farming operations around the state. Produced in conjunction with the Florida Farm Bureau, these reports aired on RFD-TV, a satellite network that primarily serves rural and farming communities nationwide.
- An informational/promotional video about the Future Farmers of America state officers.
- An informational video about Florida’s “Woman of the Year in Agriculture,” outlining the lifelong contributions to the state’s agricultural community by the 2006 recipient, Iris Wall of Indiantown.
- Three documentary videos about the winners of the 2006 Commissioner’s Agricultural-Environmental Leadership Awards, detailing the progressive environmental practices of: Riverview Flower Farm, in Riverview; Lightsey Cattle Company, in Lake Wales; and Tampa Wholesale Nursery, in Dover.
- An informational video, “Africanized Bees in Florida: Coping With the Challenge,” that explains the threat posed by Africanized bees to humans, animals, and the natural environment.
- An informational video, “Introduction of Invasive Exotic Species,” that explains the threat posed by the introduction of non-native plants and insects and the negative consequences this has on Florida vegetation and crops.
- A television public service announcement that utilizes a racing theme to acknowledge the contributions of Florida’s farmers to the state’s economy and promote Florida agricultural products to consumers as part of the “Fresh from Florida” program.



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- Archival footage of the “Great Cattle Drive of ’06,” a re-enactment of a historical Florida cattle drive.
- A video that outlined the Department’s legislative budget requests for use by House and Senate committees and staff.
- A weekly agricultural radio news program produced in conjunction with Southeast AgNet.

Graphics

The bureau is responsible for the design, illustration, and production of printed brochures, reports, booklets, posters, billboards, ads, and other marketing, promotional and educational materials pertaining to agricultural marketing programs and other activities of the Department. The bureau’s graphics

section was involved in the production of more than 350 projects during the fiscal year. Major graphics productions included:

- Commissioner’s Agricultural-Environmental Leadership Awards 2006 program booklet.
- “Woman of the Year in Agriculture Award” 2005 program booklet.
- Department Annual Report for fiscal year 2005-2006.
- Graphics for the “Fresh from Florida” racing team, including logo, three car wraps and two trailers featuring Florida fruits and vegetables, driver suit, racetrack billboards, and a magazine cover.



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- FAITC Bumper Crop campaign, which included photography, two large displays, print ads, and a brochure
- “Farm to Fuel” logo and conference materials.
- Graphic wraps for Department-owned vehicles to promote various segments of Florida’s agriculture industry including seafood, cattle, horticulture, horses, and tropical fruit.
- CAFTA marketing report, outlining potential exporting opportunities for Florida agricultural producers.
- Graphics for “Kickoff to Better Health” nutrition and healthy lifestyle promotion that tied into Super Bowl XLI in Miami, including logo, ads, billboard, web banner, poster, event banner, insert, and program cover.
- “Florida Agriculture at a Glance” educational poster.
- Presentation folder for Future Farmers of America.
- Presentation folder for the Agri-Science Leadership Program.
- Set of educational Ag Trivia flash cards for kids.
- “Fuel Up and Get Fit” healthy lifestyle and nutrition booklet for kids.
- Fruit and vegetable posters for the “Xtreme Cuisine” cooking school for kids.

Web Development

The Bureau of Education and Communication designed and maintains the Division of Marketing and Development’s two web sites, www.FloridaAgriculture.com and www.FL-Seafood.com. During fiscal year 2006-2007, the sites received approximately 663,749 visits which yielded nearly 2.69 million page views.

The sites contain information and materials that help Florida farmers more effectively market their commodities. These marketing tools include trade leads, current market prices, information about the Florida Agricultural Promotional Campaign, agricultural statistics, license and bond requirements, agricultural classified ads, point-of-purchase marketing and promotional materials, and an extensive list of agricultural links for research purposes.

The web sites also foster the notion that the more consumers know about the many agricultural commodities grown in Florida, the more they will choose to buy products that are “Fresh from Florida.” The sites inform consumers about the wholesomeness, variety, and availability of Florida agricultural products by providing: recipes for meals using Florida-grown ingredients; nutritional data; seasonal availability information; food handling and safety tips; and locations and contact information for Florida’s community farmers’ markets, U-pick farms, seafood markets, agricultural fairs and expositions, and wineries and vineyards.

The bureau develops and maintains other web sites in cooperation with agricultural organizations that have partnered with the Division of Marketing and Development to promote Florida agricultural products. These web sites include:

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Florida Wildflower Seed and Plant Growers Association Inc.
www.FloridaWildflowers.com

Florida Wildflower Advisory Council
www.WildflowerTag.com

Florida Propane Safety, Education and Research Council
www.PropaneFL.com

Food for Thought from Florida's Farmers, Florida Farm Bureau Federation
www.Florida-Farmers.com

Plants at Work, Professional Landcare Network
www.PlantsAtWork.org

The bureau also produced four issues of the Department's Intranet-based employee newsletter, Open Lines.

Food Distribution

The Department administered or provided support through commodities and/or cash for a number of U.S. Department of Agriculture programs in Florida, including the National School Lunch Program, Summer Food Service Program, and the Emergency Food Assistance Program that provides commodities for distribution to the needy.

During fiscal year 2006-2007, approximately 200 agencies serving over 2,000 food pantries, soup kitchens, and other emergency feeding organizations throughout Florida, received over 83 million pounds of food valued at almost \$56 million. As a result, almost 3 million people were reached on a daily basis, making Florida's food distribution program the fourth-largest in the nation.

The Department is involved in the Food Recovery Program and other programs that endeavor to eliminate hunger and food insecurity in the state. This fiscal year, farmers donated over 11 million pounds of fresh produce for distribution to those in need. The Department produces the Food Recovery Resource Guide, which lists organizations involved in food recovery. The guide is available to the general public and to schools, restaurants, hotels, grocery stores, and other entities involved in the preparation of meals and/or the sale of food items.

WIC/Farmers' Market Nutritional Program

The Florida Department of Agriculture and Consumer Services and the Florida Department of Health jointly administer the WIC/Farmers' Market Nutrition Program. This U.S. Department of Agriculture program has two statutory objectives: to provide fresh produce to eligible women and children who



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are nutritionally at risk; and to help local farmers by expanding the awareness of, use of, and sales at local farmers' markets. In 2006-2007, booklets totaling over \$699,000 in \$4 coupons were provided to over 34,900 eligible WIC clients in Alachua, Bay, Escambia, Gadsden, Gilchrist, Holmes, Jackson, Leon, Okaloosa, St. Johns, Santa Rosa, Sumter, Suwannee, Union, Volusia, Walton, and Washington counties. The Department entered into agreements with 210 farmers authorizing them to participate in the program. Participants can redeem the coupons for the purchase of locally grown fresh fruits and vegetables from authorized farmers at community farmers' markets. WIC/FMNP is a very successful program that provides eligible WIC clients with fresh produce and participating farmers with new customers. As a result, both groups continue to enthusiastically support the program.

Emergency Response

As the lead agency for Emergency Support Function (ESF) 11, the Department is responsible for acquiring food, water, and ice for disaster victims. In the event of a disaster, the Bureau of Food Distribution also provides USDA commodities to disaster relief organizations for the mass feeding of disaster victims. Water and ice are given out at various points of distribution throughout the affected area

In 2006-2007, Florida luckily experienced only two tropical storms, TS Alberto and TS Ernesto. The Department dispatched about 135 trucks of water and ice in response to these events.



Ensuring a Safe, Wholesome Food Supply



The Department's experienced staff of public health professionals and laboratory scientists monitors approximately 45,000 food manufacturing/processing plants, retail food establishments, and similar food businesses to ensure compliance with food wholesomeness and safety standards. The Department maintains a close working relationship with the U.S. Food and Drug Administration (FDA), the USDA, the Florida Department of Health, the Florida Department of Business and Professional Regulation, and other agencies to share information, avoid duplication of effort, and carry out food safety activities effectively and efficiently.

The Department continues to emphasize proper sanitation and safe food handling practices in the establishments that it inspects, permits, and regulates. It also provides consumer protection

safeguards by checking the accuracy of product labels, net weight, and grade standards. Laboratory analysis is performed to ensure the absence of food-borne pathogens or other contaminants. The Department continues to assist the food industry through training for the implementation of Hazard Analysis Critical Control Point (HACCP) programs. HACCP concentrates on preventing, eliminating, or reducing food safety hazards to an acceptable level; these hazards may occur during any stage of the food production or handling process. Thus far, HACCP training efforts have concentrated on high-risk foods, including seafood, sushi, sprouts, pasteurized juices, and other high-risk processes such as acidification and reduced oxygen packaging.

Ensuring a Safe, Wholesome Food Supply

One of the Department's major missions is to protect the public from unsafe foods by laboratory surveillance testing for food-borne pathogens, illegal additives, or contaminants, misrepresented products and the presence of pesticides or other chemical residues for the enforcement of established tolerances. The Department is a leader in the development and implementation of sophisticated analytical techniques and methods to ensure the safety of foods throughout the production and distribution process. By administering the Interstate Milk Shippers Program and similar state regulations, the Department assures consumers that dairy products are wholesome and are produced, processed and merchandised under sanitary conditions. These programs also enable Florida dairy farmers to ship their products in interstate commerce.

The Department emphasizes the prevention of food-borne illness, and when any situation relating to food safety arises, the Department has the authority to immediately stop the use of improper equipment or to halt the sale of products deemed unsafe to the public. As the lead state agency for food safety, the Department has continued to make preparations in its laboratories and inspection force to respond to any terrorist attacks and other emergencies related to the food supply. Inspectors have been trained as early responders, and the Food Safety Laboratories have key roles in laboratory response, both at the state and national level.



Ensuring a Safe, Wholesome Food Supply

Food and Meat Inspection

The Division of Food Safety has broad consumer protection responsibilities in the area of food safety. It inspects, permits, and regulates food manufacturing/processing plants, retail food establishments, and similar food businesses in Florida to assure compliance with food wholesomeness and safety standards. During fiscal year 2006-2007, there were 45,713 such businesses in operation in addition to 2,886 water vending machines. A total of 81,604 inspections were conducted, resulting in 3,613 individual food businesses being cited for failure to meet sanitation and food safety standards; 655 of those firms received administrative complaints and were assessed \$997,875 in fines. Other regulatory actions resulting from surveillance inspections included the issuance of 21,110 notices of violation, 26,125 stop-sale orders, and 10,852 stop-use orders. Personnel from the division wrote stop-sale orders on an excess of 5.6 million pounds of food products with 1.2 million pounds of this food ordered for destruction since it was deemed unfit for human consumption.

The division also initiated administrative actions against 403 food establishments that failed to pay the required renewal fee for a Food Establishment Permit. These establishments were open for business, had been inspected, and were in violation because they were operating without a permit. Permit renewal is required annually under Florida law. Other activities by food inspectors included visits to establishments for complaint investigations, administrative purposes, sample collection, and enforcement actions such as placement or removal of stop-sale or stop-use orders. In addition to sanitation and food safety concerns, inspectors

were also involved in a variety of other consumer protection activities. Food labels were reviewed for accuracy and compliance with federal and Florida requirements. Ground beef was tested to ensure the amount of fat was correctly stated on the label and that poultry or pork products had not been added; it was also tested for the presence of fillers and sulfites. Shucked oysters were tested for mandatory expiration dating and added water. Eggs were examined to verify labeled grade and size. Fish were tested to ensure accurate species labeling. Other foods received similar safety and quality checks.

An equally important part of the food inspection program is response to consumer needs and concerns. During fiscal year 2006-2007, over 57,000 telephone calls were received, in addition to hundreds of calls forwarded to or received directly by staff. Division staff also responded to over 1,700 email inquiries and numerous facsimiles and letters from consumers as well as permitted firms. There were numerous inquiries regarding food and food handling practices, or expressions of concern about food establishment conditions. More than 2,450 consumer complaints were investigated with the complainant being advised of the findings unless anonymity was requested.

The Division of Food Safety continues to work closely with its federal partners, FDA and USDA, on food safety-related activities. Under a contractual arrangement with the FDA, the division conducted inspections at 490 interstate food manufacturers/processors. The division and the FDA also continued with partnership agreements in several program areas that helped avoid duplication, fostered the sharing of information, and assisted each other in carrying out food safety activities. Under agreements, many of the Department's personnel are

Ensuring a Safe, Wholesome Food Supply

commissioned by the FDA while others are licensed by the USDA. Other related activities in conjunction with the USDA include periodic inspections for food products illegally imported for sale such as: illegal invasive plants, plants and animals from prohibited disease- and/or pest-infested areas, and meats from Foot-and-Mouth Disease, hog cholera, and Bovine Spongiform Encephalopathy (mad cow disease) areas.

The Division of Food Safety continued in fiscal year 2006-2007 to enforce Florida's statutory requirement that the country of origin of any fresh fruit or vegetable produced outside the United States be identified to food store customers. This identification can be accomplished through labeling of individual items or by signage at the display. During the fiscal year, 431 violations were identified and 211 administrative fines totaling \$72,800 were collected from establishments where violations were found.

In response to the need for more thorough inspections when illegal activities involving foods are uncovered, the division formed a new special inspection team. The team will focus on conducting in-depth, independent assessments and tracking sales of illegal products such as raw milk, ephedra, unapproved and misbranded dietary supplements, and antibiotic/pesticide-adulterated products originating from domestic and imported sources. The team will also conduct trace-backs to determine the origin of illegal products. In keeping with the division's emphasis on high-risk activities, the team will address those issues and products of greatest potential harm to the consumer.

The Division of Food Safety continued the surveillance of herbal dietary supplements containing harmful compounds. Ingestion of products containing ephedrine alkaloids (sometimes called ma

huang, *sida cordifolia*, or *pinellia*) has been associated with several deaths, including at least one in Florida. Inspectors from the division maintain surveillance activities for these banned products and issue stop-sale orders for ephedrine-bearing dietary supplements when found.

Responding to requests for assistance from the FDA with national product recalls and effectiveness audits, personnel from the Division of Food Safety continued to be effective. *E. coli* 0157:H7 in fresh spinach, salmonella in peanut butter, and the contaminant melamine found in pet foods led to three national recalls during which the division provided assistance. Staff confirmed that potentially contaminated food products were removed from store shelves, and if the product was found on shelves, staff physically removed it.

The division has conducted laboratory surveillance of nutrient claims for many years, but now also focuses on specific nutritional claims such as "low carbohydrate," "reduced carbohydrate," "low fat," "low sugar," "no sugar," "low salt," "fat free," and "no trans fat" to ensure that these products are accurately represented to the consuming public. The result of the division's ongoing actions on this issue has had national impact as many food processors have changed their label or their formulation to comply with labeling requirements. In addition, products have been voluntarily removed from the Florida market for failure to comply with accurate nutritional labeling criteria.

Ensuring a Safe, Wholesome Food Supply

During fiscal year 2006-2007, the Department tested 243 samples for nutritional label claims, resulting in nine warning letters for nutritional labeling violations. Appropriate fines were assessed for non-compliance with the law. The Department issued notice-of-violation letters, adverse findings letters, and defect action level letters when necessary to assure compliance with the law. The letters covered such issues as excess fat in ground beef; undeclared allergens; high bacterial plate counts in various ready-to-eat (RTE) foods such as sandwiches, salads, cheese, sprouts, sushi, and produce; species adulteration; and general labeling deficiencies.

The Division of Food Safety has been an active participant in the FDA Voluntary National Retail Food Regulatory Program Standards, which have been designed to serve as a guide to regulatory retail food programs managers in the design and management of a retail food program and to provide a means of recognition for those programs that have met these standards. The intent in the development of these standards is to establish a basic foundation for administration of a model retail food regulatory program. It is a viable and evolving program in which the division currently meets five of the nine program standards and shares the lead with comparable state programs nationally.

The division continues to be actively involved in the ongoing training and implementation of Hazard Analysis Critical Control Point (HACCP) programs in the food industry. HACCP is an internationally recognized, science-based, systematic, preventive, process control program to assure the production of safe food. It complements existing sanitation and good manufacturing practices programs by preventing, eliminating, or reducing hazards that may occur during any stage of the food production

or handling process. Since December 1997, federal and state food rules have required seafood processors to evaluate their food handling processes and to develop and follow an HACCP plan if there was a critical control point in the process. During the 2006-2007 fiscal year, 628 verification HACCP inspections were conducted for the bureau's various HACCP programs. HACCP verification inspections included high-risk products such as seafood, sprouts, fresh juice, and sushi. The Department's HACCP unit continues to coordinate with industry and other agencies to provide training, assistance, and information.

Several firms in Florida grow fresh sprouts for shipment to retail outlets such as grocery stores and supermarkets. The Department has required sprout growers to institute and use an HACCP plan to control the hazards in the growth of these potentially hazardous foods. In 2001, FDA published regulations which require fresh juice processors to apply HACCP principles in the production of juice for beverage use. During the 2006-2007 fiscal year, the Department conducted 70 HACCP inspections of fresh-squeezed juice manufacturing firms. The Department continues to provide training and technical assistance to the state's small citrus juice processors. HACCP personnel continue to be involved with industry, academia, and regulatory agencies to provide training support and expertise as HACCP principles are applied in other food industries such as fresh citrus juice processors, sprout growers, shell eggs, and retail establishments.

Ensuring a Safe, Wholesome Food Supply

The division continues an active intra-agency partnership with the Department's Agricultural Interdiction Stations. Cooperation between the Division of Food Safety and Agricultural Law Enforcement has resulted in enhancement of the safety of food through continuous monitoring and rapid response to problems associated with the transportation of foods throughout the farm-to-table food continuum at every road portal into Florida. Through coordinated activities, thousands of pounds of potentially unsafe food have been destroyed and prevented from entering Florida's food chain, or the vehicles have been sealed and sent back to their state of origin. Communications with the regulatory authorities in other states allow food safety professionals from comparative agencies in neighboring states to meet such returned vehicles and supervise the destruction of the products and take appropriate regulatory action against the shipping firm.

The division is actively involved with the Florida Food Safety and Food Defense Advisory Council, which was created to serve as a forum for presenting, investigating, and evaluating issues relevant to the safety and security of the state's food supply and brings together diverse partners to address common food safety and food defense issues of concern to the citizens of Florida. Since meat, poultry, eggs, juice, dairy, and other food commodities are susceptible to contamination from a wide variety of physical, microbial, chemical, and radiological agents in transportation, the council created a workgroup to address the issue of transportation in the food industry with a particular focus on tanker trucks. The workgroup was specifically charged with analyzing the industry's current cleaning regimens and security issues and their recommendations have now become the standard guidance for the food transportation industry in Florida.

The substitution of higher-priced, wild-caught fish with less expensive farm-raised fish continues to be a major concern. The farm-raised fish are quite inexpensive when compared to fish such as grouper or snapper, but the fillets are similar in appearance. This price differential creates a potential for large-scale misbranding of seafood. Advances in technology have enabled the Division of Food Safety to confirm the true identity of some of these seafood items. Testing of imported grouper and snapper for confirmation of species has disclosed a significant percentage of misbranded lots. With the help of other state and federal agencies, academia, and industry, the division continues to develop tests and procedures to ensure that the consuming public receives wholesome, safe, and properly identified seafood. When misbranding is verified, the product is placed under stop-sale order and is removed from the marketplace.

In fiscal year 2006-2007, the Department processed and issued over 5,800 Certificates of Free Sale. These documents are provided for food products that are used for human consumption and exported to other countries. Businesses receiving such documents must be permitted by the Department and have a current satisfactory sanitation rating. One hundred and six firms received service for shipment of U.S.-originated food products to some 56 different countries.

The Department oversees bottled water plants, bulk water vendors, and self-vending water machines. The Department coordinates with other agencies to ensure all drinking water processed in Florida continues to meet the federal and state Safe Drinking Water Acts. The Department also works closely with the Bottled Water Association on an international level since bottled water is imported from various countries and the imported water must meet

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all applicable drinking water standards. Additionally, there are over 2,886 self-vending water machines at convenient locations throughout the state. They offer another source of safe and convenient drinking water to Florida's residents and visitors. The Department uniquely identifies and tracks each machine to make sure it is properly inspected and sampled at established intervals.

Self-vending ice units are a new addition to the food industry in Florida. These units are self-contained modular buildings that produce, store, bag, and vend ice to consumers. The Department has been actively involved in evaluating the design, construction, and sanitation procedures to confirm compliance of the units with all sanitation code requirements.

Marketplace survey food samples are taken routinely during the inspection process or if violation of state or federal standards is suspected. In fiscal year 2006-2007, division field inspection staff collected 7,245 samples which were sent to the Department's Tallahassee Bureau of Food Laboratories for testing and analysis. Since Florida has some of the most stringent and far-reaching food safety laws in the nation, regulatory action is often taken on the laboratory results from the survey samples. The division has initiated nationwide and statewide recalls of food products in conjunction with the FDA. These recalls are based on laboratory results that confirm that food samples were adulterated, contaminated, held under unsanitary conditions, temperature abused, or mislabeled. The marketplace survey sample program is just one more level of consumer protection that the Division of Food Safety offers to Floridians.



Division staff maintain an active role in managing food safety issues across Florida, including providing assistance to federal, state, and local health agencies in the investigation of food-borne illness, coordinating the collection of samples to monitor potentially unsafe foods, responding to consumer requests, providing educational materials, conducting informal hearings on administrative complaints, and interpreting rules to maintain an overall food safety program that addresses both local and national concerns.

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Chemical Residue Laboratories

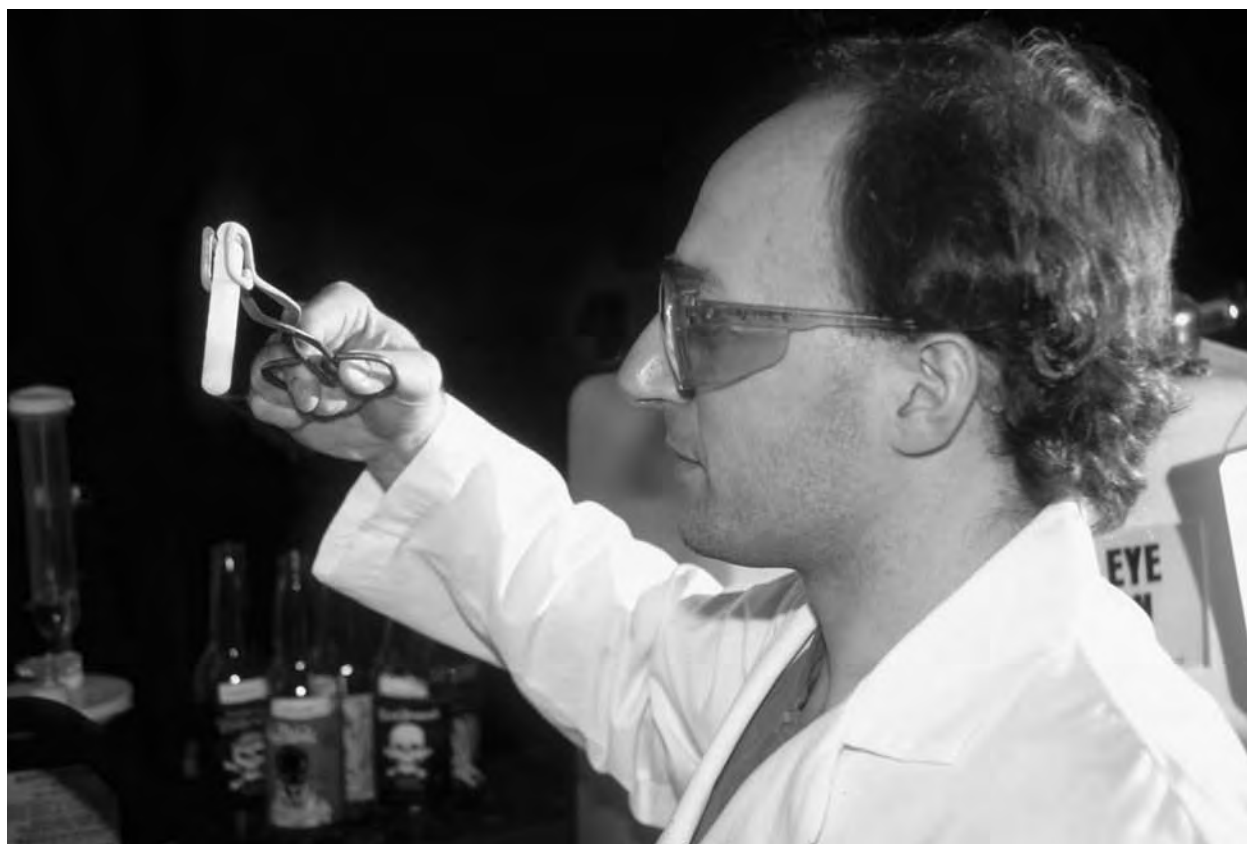
One of the Department's major missions is to protect the public by monitoring fruits, vegetables, seafood, honey, and other foods for the presence of unsafe residues of pesticides, antibiotics, and other chemicals and the enforcement of authorized tolerances. The Bureau of Chemical Residue Laboratories analyzes food items for the presence of potential chemical contaminants.

Food samples are collected from farms, packing-houses, processing facilities, and in the distribution chain. All foods grown in Florida, and those brought into the state to be offered for sale, are subject to

unannounced collection and analytical testing to assure adherence to the standards for allowable levels of pesticide or other chemicals, freedom from contamination or illegally used chemicals, and proper representation in labeling. The Department also provides pesticide residue data to federal agencies for use in making dietary risk assessments and for other purposes. During fiscal year 2006-2007, the Department's laboratories conducted some 395,231 different determinations for residues of specifically targeted pesticides and other chemicals on 2,913 food product samples.

Pesticide Residues

A primary focus of the Chemical Residue program is the analysis of pesticide residues in fresh fruits



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and vegetables. The Department's regulatory program is one of the most comprehensive monitoring and enforcement programs in the nation and provides the residents of Florida with valuable information concerning the safety of the food supply. In addition to assuring the proper use of pesticides by Florida growers, a thorough testing program enhances the status of Florida-grown produce in nationwide and international markets.

Florida is an important producer of fresh fruits and vegetables for the nation. Samples are selected for regulatory surveillance based on several factors. An emphasis is put on Florida-grown commodities. Statistics on Florida-grown produce, as well as national consumption patterns and previous history of pesticide residue findings, are used to develop sampling plans that will target products most likely to contain illegal residues.

During the past year, the Department conducted surveys of tomato, corn, potato, cucumber, pepper, and strawberry growers early in the growing seasons in order to assure proper pesticide use. In support of Florida-grown citrus, 122 samples were analyzed, including 47 oranges, 47 grapefruit, 27 tangerines, and one lemon. Grapefruit are exported to Japan and growers must meet strict pesticide regulations. Data provided by the Department can help provide assurance of the safety of Florida produce and aid its acceptance into foreign markets.

During fiscal year 2006-2007, the Chemical Residue Laboratories analyzed 1,492 samples in its regulatory surveillance monitoring program and 1,421 additional samples of bananas, peas, kale, collards and watermelon under contract with the USDA. The regulatory samples included 1,446 fresh fruit and vegetable samples that were tested for pesticides to assure compliance with federal pesticide

residue tolerances. In addition, 35 honey samples, one sugar syrup, and 10 fish samples were tested for illegally used antibiotics. Products sampled in the regulatory program were grown in Florida (919, or 61.6 percent) or other parts of the United States (262, or 17.5 percent), or were imported foods from 24 different countries destined for Florida markets (304, or 20.4 percent), or the country of origin was unknown (seven, or 0.5 percent).

Pesticide residue violations in fresh fruits and vegetables led to 28 incidents of food adulteration in fiscal year 2006-2007. An additional six violations for antibiotic adulteration of honey were also issued. Whenever possible, field personnel traced back product to its origin and took additional samples. Of the fresh fruits and vegetables analyzed in this regulatory surveillance program, 1.9 percent exceeded established tolerance levels or contained pesticides not approved for use on a commodity. However, in imported produce tested, 6.3 percent (19 of 304) was identified with illegal residues, including 10 malanga samples, while in U.S. produce only 0.6 percent (seven of 1,181) was in violation. By agreement with the FDA, Florida's pesticide surveillance focus is on domestic products while the FDA targets imports. A strong FDA partnership with Florida provides information and resources needed to prevent violative product from being distributed.

More than 170 pesticides are screened in the regulatory program. Pesticides of particular interest in Florida crops or new registrations are routinely added to the screen. The Department continues to support Florida's citrus industry by continually expanding its pesticide analysis screen to include agrichemicals with special use exemptions as well as those of particular interest for citrus export. The Department also focused on enforcement of pesticide crisis exemptions which were granted

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to Florida growers. Of the active ingredients with exemptions, all of the fruit, vegetable, and honey exemptions are monitored, including myclobutanil in legumes, thiophanate methyl in tomatoes and citrus, and coumophos in honey. Additional special surveys to monitor crisis exemptions for other commodities/pesticide combinations will be continued.

The Department continues to be active in the USDA Pesticide Data Program (PDP), an internationally recognized program that focuses on providing comprehensive data on pesticides for the purpose of risk assessment. An additional 1,421 samples of bananas, peas, kale, collards, and watermelon were analyzed as a part of this program, which targets very low part-per-billion levels of pesticides in commodities most frequently consumed by infants and children. Samples include both domestic and imported products. Commodities and sampling sites are chosen to statistically represent the product available for consumption throughout the United States.

Antibiotic Residues

In the fall of 2005, the fluoroquinolone antibiotics ciprofloxacin and enrofloxacin were detected in imported fish. Analyses of fish collected by Florida and analyzed by the FDA confirmed the presence of fluoroquinolones. Florida-detained and violative product was voluntarily destroyed as a result of this cooperative effort. In 2007, follow-up analyses by the Chemical Residue Laboratory, for fluoroquinolones in imported catfish, did not result in violations. However, analyses of fluoroquinolones in honey resulted in six violations (six of 35, or 17 percent). Using the method and data provided by the Chemical Residue Laboratory, the FDA issued an import alert for four Chinese firms importing honey to the United States.

Additionally, the Bureau of Chemical Residue laboratories received a Leveraging/Collaboration award from FDA for exceptional collaborative effort using state laboratory analyses to support FDA regulatory actions resulting in protection from adulterated imported honey. The inter-agency effort effectively resulted in increased protection of public health by reducing the potential for adulterated honey to enter into U.S. commerce.

Food Laboratories

The Bureau of Food Laboratories uses chemical, microbiological, molecular, and physical methods to analyze foods processed or sold in Florida. These analyses help to ensure a safe and wholesome food supply by verifying the absence of adulterants, especially microbial food pathogens and food allergens, by verifying conformance with standards of safety and quality, and by ensuring accurate representation in labeling and nutritional claims. Emphasis is placed on current and emerging food safety issues, such as microbiological contamination, unapproved food components, filth, chemical and heavy-metal contaminants, new food and food packaging technology, dietary supplements and other label and nutritional claims, and natural toxicants. The Bureau of Food Laboratories is also a national leader in preparations to respond in the event of a terrorist incident or emergency event involving the food supply.

Testing of food products using molecular methods, especially nucleic acid analyses based on the polymerase chain reaction (PCR), continued expansion during the year and now includes testing for *Escherichia coli* O157:H7, Shigella, and Salmonella. Molecular methods for analysis of Hepatitis A in green onions, cyclospora in produce, noroviruses,

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and *Vibrio parahaemolyticus* and *Vibrio cholerae* in shellfish are undergoing development or validation. Testing for specific toxin genes in *E. coli* continued for the USDA Microbiological Data Program (MDP).

DNA fingerprinting, or pulsed field gel electrophoresis (PFGE), is being performed by the Food Laboratories for quality assurance, as well as for typing when specific organisms such as *Listeria monocytogenes* or *Salmonella* are recovered from a food product. The patterns produced by the PFGE are submitted for inclusion in the PulseNet national database. This data can then be used by epidemiologists in search of the causative agent for outbreaks. The staff is certified in PFGE by the Centers for Disease Control and Prevention.

Food Analyses

During fiscal year 2006-2007, the Department performed 45,732 analyses on 8,471 samples. The majority of samples (7,245) were received under Division of Food Safety or other Department regulatory inspection programs. In addition, 330 samples were received from the joint state and USDA MDP, and 896 were other special samples. Out of 7,245 regulatory samples, 6,584 samples, representing 90.88 percent of state program samples, were found to be in compliance with all applicable food safety requirements. A summary of regulatory pathogen analyses results is shown below:

Summary of Regulatory Pathogen Analyses

Organism	Adulterated Samples
<i>Listeria monocytogenes</i>	32 of 2,265
<i>Salmonella</i>	3 of 1,538
<i>E. coli</i> (generic)	23 of 2,330
<i>E. coli</i> O157:H7	0 of 586
<i>Staphylococcus aureus</i>	9 of 1,939

Food safety issues remain a major emphasis of the analytical program. With the continued identification of food-borne illness outbreaks, increased monitoring for pathogens in ready-to-eat food is necessary. Microbiological pathogen analyses focused on *Salmonella*, *Listeria monocytogenes*, *Staphylococcus aureus*, *E. coli* O157:H7, and generic *E. coli*. Targeted products for these analyses included ready-to-eat produce, processed meats, fresh cut vegetables, sprouts, prepared salads, ground beef, cheese, smoked fish, spices, and sandwiches. As a result of past outbreaks, the Department continues to monitor fresh citrus juices. Additionally, analyses of bottled and vended water and ice for adulteration by either microbiological or

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chemical contaminants represented a significant component of state surveillance programs.

Summary of Water/Ice Analyses (Microbiological)

Sample type	Adulterated/Misbranded
Vended and Bottled Water	20 of 839
Ice	127 of 721

In its seventh year, the USDA Microbiological Data Program, which is designed to determine the frequency that potential pathogens are detected in fresh produce, required Florida, Colorado, Michigan, New York, Ohio, Texas, Washington State, and Wisconsin to systematically monitor fresh produce commodities by testing for *Salmonella* and generic *E. coli*. Three hundred and thirty samples were analyzed by the Department this year. Commodities tested included leaf and romaine lettuce, domestic and imported tomatoes, cantaloupe, green onions, and cilantro. The sampling plans and findings of the collective participating laboratories provided an accurate representation of national exposure to the selected pathogens. Further expansion of this program, both in types of organisms (for example, adding testing for *Shigella*) and commodities tested is expected. In 2005-2006, the MDP program was expanded to include analyses for *E. coli* O157:H7. A project to test for toxigenic *E. coli* other than *E. coli* O157:H7 continued this year for the MDP program using a multiplex PCR test. This year, the numbers were decreased due to a shortened testing time period.

In August 2002, the Bureau of Food Laboratories was certified by the FDA for microbiological testing of shellfish in support of the National Shellfish Sanitation Program (NSSP). The laboratory was

re-inspected in spring of 2007 and is maintaining competency for this certification.

Other areas of emphasis in public health and consumer protection include monitoring juices, honey, syrups, and vanilla for fraudulent formulations or adulteration; ground meats for fat claims and species identification; candy for lead; and candy, sodas and bakery products for artificial colors. Bakery products are also monitored for insect filth and rodent contamination, as well as nutritional claims. Dietary supplements continue to be monitored for the presence of ephedra alkaloids. Unsafe or misrepresented products are removed from sale by the Bureau of Food and Meat Inspection.

Florida's fresh seafood is monitored by the Department in response to concerns regarding species substitution, decomposition (histamine in scombroid species and indole in shrimp), and safe levels of mercury. Fish tested by the Department include tuna, grouper, mahi-mahi, red snapper, salmon, swordfish, mackerel, blue marlin, amberjack, and catfish. A DNA sequencing method for species authentication was validated and is in use.

The Department continues its extensive surveillance of products making nutritional claims such as "low carbohydrate" and "fat free." Products making "sugar free" claims have been under particular scrutiny due to their potential impact on diabetics and other consumers. Monitoring of undeclared food allergens continues with particular focus on milk, egg, and peanut allergens. With the passing of the Federal Food Allergen Labeling and Consumer Protection Act, the Department continues to ensure appropriate and understandable food allergen labeling. The requirement for trans-fat labeling was effective

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beginning last year. The Department has extensively surveyed the market for accuracy in trans-fat declarations, as well as correctness in labeling.

A norovirus detection method for oysters developed in-house using an FTA filter was modified to detect hepatitis A on green onions, the cause of a recent large outbreak, and cyclospora analysis is being evaluated. The Molecular Laboratory also modified and tested food sample preparation methods for the Food Emergency Response Network (FERN) protocols for real-time PCR and conventional PCR detection for certain pathogens on food samples.

ISO 17025 Accreditation

On May 21, 2007, both laboratory bureaus attained American Association for Laboratory Accreditation (A2LA) accreditation to the ISO/IEC 17025 standard, General Requirements for the Competence of Testing and Calibration Laboratories, for the specific tests listed in certificates 2534.01, 2534.02, and 2534.03. The ISO/IEC 17025 standard is recognized internationally as the standard for assessing the quality and competence of analytical testing activities, and the two bureaus attained accreditation after undergoing a rigorous four-day audit by A2LA assessors. Accreditation to this standard provides the Department with international credibility, showing that analytical data produced by the two bureaus meets rigorous standards for quality and laboratory competence. This accomplishment came after a lengthy, intense process of developing and implementing policies and procedures governing virtually all aspects of laboratory operations, a process that required the dedication of considerable resources, a high level of commitment by all laboratory staff, and the continued backing and support of senior management. Ongoing work now will include auditing of the system, corrective actions, and

preventive actions for improvement, all combining to ensure the results generated by the laboratories meet the Department's needs.

National Databases

Both the Food Laboratories and the Chemical Residue Laboratories continue to provide data to the FDA-supported eLEXNET national data system, which allows real-time exchange of information concerning potential or suspected food supply problems. Staff members use eLEXNET for reporting results for Food Emergency Response Network (FERN) projects. Data is exported from the laboratories database to the eLEXNET system.

An application was also developed which provides direct export of data collected for the Pesticide Data Program from the laboratories database to the PDP Oracle database in Washington, D.C.

Education and Training

Educational opportunities for laboratory personnel were emphasized in order to remain on the leading edge of science and technology. In July 2006, the Department hosted the 43rd Annual Florida Pesticide Residue Workshop (FPRW) along with the 8th Food-borne Pathogen Analysis Conference. Both conferences are highly regarded for their excellent content and speakers. They allow Department chemists and microbiologists to share the latest developments in technology with experts from other agencies and nations. The conferences were attended by over 180 scientists and included representatives from six foreign countries. In addition, Department scientists have been active on several national committees, and attended training workshops in order to update knowledge in the areas of analytical chemistry, microbiology, and new tech-

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nologies. Staff members, in addition, participated as trainers for national training programs for FERN and the National Laboratory Training Network.

Responding to Food Emergencies and Terrorism

The Food and Chemical Residue Laboratories continue their initiatives to enhance capability to respond to a terrorism incident involving the food supply. Both laboratories are members of the Food Emergency Response Network (FERN) and have received federal grants to build capabilities and participate in national surveillance assignments. FERN was formed to respond specifically to national food emergencies and the threat of terrorism in foods. In addition to biological capabilities, the laboratories have expanded counter-terrorism capabilities to include testing foods for chemical agents. The FERN laboratories were activated after melamine contamination was discovered in pet food and conducted testing to assure that melamine had not contaminated the human food supply.

The Division of Food Safety and the laboratories maintain strong partnerships with other state and federal agencies, including the Florida Department of Health, FDA, USDA, and the U.S. Centers for Disease Control and Prevention (CDC). The Food Safety Laboratories, together with other state agencies, have developed a statewide laboratory response plan to assure a coordinated and effective response to emergencies. Representatives of the Department's and DOH's laboratories meet quarterly to enhance the abilities of both agencies to respond in the event of an emergency.

The Food Laboratories have undergone inspections by the FDA, CDC, and USDA regarding the capability to safely handle and securely protect highly dangerous select agents and toxins, and the labo-

ratories have satisfied all requirements. This has allowed the Department to be one of the few state agricultural departments to have a food laboratory as a member of the national Laboratory Response Network (LRN) for public health protection.

Accomplishments in this domestic/food security initiative include operation of an active Biosafety Level-3 laboratory, the acquisition and use of sophisticated analytical equipment, and substantial ongoing training of staff in procedures for processing and analyzing samples suspected of containing terrorist threat agents. Staff attended training on FERN and Laboratory Response Network protocols at FDA and USDA laboratories, technical meetings with other laboratories, and workshops and teleconferences. The Chemical Residue laboratory hosted the eight FERN Chemistry Cooperative Agreement laboratories for a two-day training meeting in Tallahassee. Additionally, laboratory staff gave lectures and presentations on issues in domestic/food security at conferences throughout Florida. Food Laboratories staff have been instructors at FERN workshops on real-time PCR as well as microbiological analysis for potential threat agents.

Previously renovated laboratory space in both the Chemical Residue and Food Laboratories provides areas for safe and secure preparation and analysis of foods for presence of hazardous chemical agents. The renovated space includes separate chemical extraction areas with chemical fume hoods for both organic and metals sample preparation. Laboratory space for eight instrument bays, equipped with overhead ventilation hoods, house gas and liquid mass spectrometers and other instrumentation dedicated to counterterrorism work. Upgrades to computer capabilities and electricity, purified water, and analytical gas supplies have been added to support this new technology.

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Through FERN cooperative agreements, both the Food and Chemical Residue Laboratories are performing extensive testing and verification of FERN methods and protocols to be used in the event of national food emergencies. Funds and instrumentation received under the cooperative agreements have enabled the laboratories to develop complex microbiology and molecular analysis, as well as toxin screening techniques utilizing gas, liquid, and inductively coupled mass spectrophotometry. FERN methods have been developed and validated in several high-risk commodities. Instrument and method training for analysts, as well as participation in FERN surveillance exercises and proficiency check samples, has significantly improved the laboratories' ability to detect agents of concern in complicated food matrices. The collaborative contributions of these two state food laboratories to national food security exercises are making Florida a national leader in food safety and security. The laboratories participated in FDA or FERN counter-terrorism surveillance exercises and several FERN and LRN proficiencies during 2006-2007.

Division of Dairy Industry

The Department's Dairy Division ensures that dairy products purchased by Florida consumers are wholesome, produced under sanitary conditions, and correctly labeled. The division regulates the production, transporting, processing, distribution, and labeling of milk and milk products. It establishes standards for these products, whether they originate in Florida or other states.

The division issues permits and conducts inspections for Florida dairy facilities. As of June 30, 2007, these facilities included:

Dairy farms	146
Milk processing plants	18
Frozen dessert manufacturers	64
Single-service milk container manufacturers	18
Milk distribution depots	41
Milk receiving, transfer, and wash stations	8
Milk hauling services	18

In addition to its inspection program, the division collects and tests samples from dairy farms and processing plants for compliance with established product quality standards. These samples are collected by field inspectors and tested in a division laboratory for excessive bacteria and somatic cells and for the presence of antibiotics, added water, and other impurities.



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The programs administered by the Division of Dairy Industry are part of a uniform national dairy sanitation program outlined in the Pasteurized Milk Ordinance (PMO) published by the U.S. Food and Drug Administration (FDA). Likewise, most of the dairy product quality standards enforced by the division are part of the PMO or the Code of Federal Regulations. As in all states, both the PMO and the relevant sections of the Code of Federal Regulation have been adopted in state statute or rule.

The fact that all states have adopted uniform regulations makes it possible to ship dairy products from state to state with a minimum amount of interstate regulatory interference. The interstate shipment of dairy products is coordinated through the Interstate Milk Shippers Conference, an organization that includes representation from FDA, the dairy producing and processing industry, and all state dairy regulatory agencies.

An IMS Rating Officer routinely performs surveys for the purpose of determining compliance with the PMO. In addition, the FDA will conduct periodic check ratings to determine if both the industry and state regulatory agency are in compliance with the requirements in the PMO. A state that fails its FDA inspection can be denied the right to ship Grade A milk across state lines. During fiscal year 2006-2007, IMS Rating Officers performed five plant surveys, seven single-service containers manufacturer audits, and 11 farm group surveys, involving 149 dairy farm inspections. FDA conducted seven plant check ratings, seven single-service container manufacturer audits, and three farm group check ratings, involving 34 farms.

The Florida Dairy Industry

Florida dairy farms are large, milking an average of

about 900 cows each. In spite of the hot, humid climate, these cows average about 16,417 pounds of milk per year or about five gallons per day per cow. Even though the state's 132,000 dairy cows rank it first in the Southeast and 16th nationally, Florida still imports approximately 30 percent of its milk – and the proportion of imported milk is growing. Florida's 18 Grade A milk processors include four Dean Food plants, two Publix plants, one Winn-Dixie plant, and two plants owned by National Dairy Holdings Group, LP.

Dairy Inspections

The division's 12 field inspectors are stationed from Miami to Pensacola. They make regular visits to dairy farms and processing plants to inspect, consult, and collect samples. During the past year, dairy inspectors performed 1,769 inspections at dairy farms and plants in Florida. They also collected 11,138 samples of milk and milk products. They made 1,550 inspections of milk transport tankers and bulk milk haulers.

Monitoring Antibiotics in Milk

The industry has established a rigorous program to monitor milk for contamination with residues of antibiotics commonly used to treat cows on dairy farms. During the 2006-2007 fiscal year, 60,029 transport tankers, representing more than 2.8 billion pounds of milk, were checked for antibiotics in Florida. Only nine (one in 6,670) of these tankers, were found to contain traces of antibiotics; all nine loads were dumped. Nationally, about 1 in 2,615 tankers of milk is found to have antibiotic contamination. These statistics show that Florida dairymen do an exceptional job of preventing antibiotic residues in their milk.

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Division of Aquaculture

The Division of Aquaculture was created in 1999 by the Florida Legislature and is responsible for six programs: aquaculture certification, aquaculture leasing of sovereignty submerged land, shellfish resources development, shellfish processing plant certification, shellfish harvesting area management, and technical support. Florida's aquaculture industry is one of the leading producers in the nation with \$75 million in farm gate value during the 2005 production year. This annual farm gate value reflects a significant drop in dollar value as a result of the devastating impacts caused by Hurricanes Charley, Dennis, Katrina, and Wilma. The Florida aquaculture industry is still recovering from tremendous losses to infrastructure and inventories and subsequent impacts in the market place.

Aquaculture Certification Program

Chapter 597, F.S., established the Aquaculture Certificate of Registration to recognize aqua-farming businesses. Aquacultural businesses in Florida are required to be certified annually and to attest that they will comply with the Best Management Practices provided in Chapter 5L-3, Florida Administrative Code. The Aquaculture Certificate of Registration is used to identify aquaculture producers as members of Florida's agricultural community and to identify aquacultural products produced in the state. Site inspections are conducted at aquaculture facilities to ensure compliance.

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The Department certified 985 aquaculture facilities during fiscal year 2006-2007. Forty-eight percent of certified farms produce shellfish, 23 percent produce ornamental fish and plants, and 18 percent produce food fish, with the remainder producing live rock, alligators, and bait. Certified farms are found in 59 of the state's 67 counties, with the highest number of certified farms (21 percent) occurring in Levy County. Hillsborough County is next with 9 percent, followed by Dixie and Lee counties with 6 percent each.

Sovereignty Submerged Lands Leasing Program

The Department is responsible for the Aquaculture Lease Program under the provisions in Chapter 253, F.S. Currently, the Department administers 609 aquaculture leases containing about 1,496 acres and 79 shellfish leases containing about 1,285 acres. Aquaculture leases are located in Brevard, Charlotte, Collier, Dixie, Franklin, Indian River, Lee, Levy, Manatee, Monroe, Palm Beach, Pinellas, St. Johns, Volusia, and Wakulla counties.

In response to its statutory mandate, the Department identifies tracts of submerged lands throughout the state that are suitable for aquacultural development. Twenty-one Aquaculture Use Areas have been identified by the Department and authorized by the board of trustees in nine coastal counties, including Brevard, Charlotte, Collier, Dixie, Franklin, Indian River, Lee, Levy, and Volusia.

Oyster Culture and Shellfish Resource Development Program

Under the mandate to improve, enlarge, and protect the oyster and clam resources of the state, the Department is actively engaged in enhancing

shellfish resources and restoring oyster reefs on public submerged lands. During fiscal year 2006-2007, the Department collected 118,452 bushels of processed oyster shell from processors in Franklin County and 9,720 bushels from processors in Levy County. Oyster resource development projects were conducted in cooperation with local oystermen's associations in four coastal counties. A total of 178,304 bushels of live oysters were replanted on public reefs in Franklin, Wakulla, Dixie, and Levy counties.

Restoring Public Oyster Reefs

The Department is involved in a comprehensive multi-county project to restore oyster reefs that were damaged by recent hurricanes. During fiscal year 2006-2007, 13,120 tons of fossilized shell were collected and 87,552 bushels of shell were planted. This project is designed to enhance oyster production, to facilitate recovery of the oyster business, and to provide significant resource restoration benefits. The project promotes the development of self-sustaining reef communities, which in turn perform ecological services which contribute to fisheries habitat, ecosystem stability, nutrient cycling, and improved water quality. Functioning oyster reefs are recognized as an essential component in stabilizing and sustaining ecological relationships in almost all Gulf estuarine ecosystems.

Shellfish Harvesting Area Classification and Management Program

This program seeks to classify and manage Florida coastal waters for maximum use of shellfish resource, protection of public health, and promotion of a healthy coastal environment. The program is audited each year by the U.S. Food and Drug Administration to ensure compliance with the provi-

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sions of the National Shellfish Sanitation Program. A total of 38 shellfish harvesting areas are currently classified and managed statewide. During fiscal year 2006-2007, the required annual update reports were completed for all 38 shellfish harvesting areas and all of the shellfish harvesting areas requiring a triennial reappraisal report were completed. The data and reports support current classification and management for all shellfish harvesting areas. During fiscal year 2006-2007, a total of 734 sampling excursions were conducted to collect and analyze 12,737 water samples for fecal coliform bacteria. There were 305 closures and re-openings of shellfish harvesting areas.

Shellfish Processing Facility Program

This program seeks to ensure wholesome shellfish products through inspection, education, and enforcement of state regulations and national guidelines. The program is audited each year by the U.S. Food and Drug Administration to ensure compliance with the provisions of the National Shellfish Sanitation Program. A total of 96 Shellfish Processing Plant Certifications were issued during fiscal year 2006-2007. A total of 369 regulatory processing plant inspections were conducted. Based on fiscal year 2006-2007 inspection results, a total of 42 warning letters and five settlement letters were issued. Action was taken to destroy shellfish products when they were found to be adulterated, contaminated, unwholesome, mislabeled, or exceeding the product shelf life.

Technical Support Programs

The division provides substantial technical and administrative support for aquacultural operations. Aquaculture Best Management Practice revision or development is achieved through the formation

of technical advisory committees composed of producer, agency, Extension, and environmental representatives. Scientific expertise is coordinated through the Transgenic Aquatic Species Task Force and Apple Snail Task Force to advise the division regarding potential environmental effects associated with genetically modified fish or exotic apple snails. A hurricane disaster assistance grant program was managed that disbursed \$3.6 million of federal funds to 139 eligible aquaculturists. A bi-monthly industry newsletter is produced and mailed to all certified aquaculturists, shellfish processing houses, and other interested parties to communicate timely technical information, state and federal regulatory updates, grants and aids programs, or event announcements. Technical bulletins are periodically produced and distributed to provide in-depth information on topics like red tide, red tide regulations, shellfish handling and harvesting, shellfish net coatings, and hurricane preparedness. Staff provides and participates in workshops, seminars, and problem-solving activities to help resolve environmental issues or provide information to Florida farmers. In addition, staff manages contracts funded through legislative appropriations to provide answers to industry-identified production, technical, or economic challenges.



Conserving the Natural Environment



Agricultural Environmental Services

Scientific Evaluation

The Scientific Evaluation Section (SES) in the Bureau of Pesticides is a small group of scientists representing a range of scientific disciplines. The SES staff has expertise in analytical chemistry, ecological and human health risk assessment, environmental modeling, geology, hydrology, soil science, and toxicology. The primary function of SES is to conduct environmental fate and health risk assessments on pesticide products seeking registration. SES, however, also works closely with the U.S. Environmental Protection Agency (EPA), other Department bureaus and offices, pesticide

registrants, and grower associations to evaluate the impacts of pesticides on human and ecological health, endangered species, ground and surface water quality, and air quality. Several of SES's more intensive efforts from this past year are highlighted below.

Registration Reviews

During fiscal year 2006-2007, SES conducted environmental fate and effects assessments on 26 active ingredients in 33 product brands seeking registration. SES recommended approval for all registration requests after determining that the products would introduce no unacceptable risk to humans or non-target species when used according to the label. In some cases, SES recommended approval of the registration on the condition that the registrant made changes to the label to mitigate risks or provide additional information to the Depart-

Conserving the Natural Environment

ment. SES also evaluated the environmental fate and risks of three products seeking emergency exemptions.

Termiticide Efficacy Reviews

In March 2003, the Department adopted the Termiticide Efficacy Rule (5E-2.0311 Florida Administrative Code), which requires that any product registered as a preventative treatment against termites in new construction in Florida must satisfy specific efficacy criteria. Since the rule's adoption, the division has reviewed efficacy submissions from 28 registrants associated with 69 products. SES has posted 11 completed efficacy reviews on the division web site. In addition, for products registered at the time of rule adoption, the registrant is granted time necessary to gather efficacy data. In the past year SES has reviewed several protocols to collect such data and has reviewed annual reports for studies already in progress. SES continues to provide oversight to assure that registered products satisfy the rule and in the coming year, anticipates the submission of additional annual reports from active efficacy studies.

Report of Air Concentrations of Pesticides at a School

In February, several press resources reported potentially hazardous levels of three agricultural pesticides in air near an elementary school, located adjacent to farmland in Hastings, Florida. The study reporting these levels was conducted by two high school students and the Pesticide Action Network of North America (PANNA). In addition, the St. Johns County School Board conducted its own monitoring project and reported no unacceptable detections. In response to the two studies and their divergent conclusion, SES staff consulted with air

quality regulatory experts, reviewed toxicity data for the detected compounds, reviewed the sampling protocol from each study, and evaluated the potential for risks to children at the school. SES is currently preparing a report of this extensive effort with completion expected in the fall of 2007. The Department will provide it to the school board and other stakeholders.

Update of Chlorpyrifos Special Local Need (SLN) label

In 2000, the EPA Reregistration Eligibility Decision (RED) document on chlorpyrifos recommended significant reductions in the use of chlorpyrifos on sweet corn. In addition, the EPA intended to discontinue Florida's Special Local Need (SLN) label for use on sweet corn, which provided growers important use options for controlling pests. SES evaluated the potential risks of various alternate-use scenarios that could be incorporated into a new SLN label; the goal was to identify use conditions that would pose no greater risk to non-target organisms, but would afford users of this compound the needed flexibility. The Department submitted the SES review to the EPA and recently learned the agency will adopt the Department's recommendations for a new SLN. This effort illustrates how the Department can assist in meeting the needs of Florida's growers while continuing to protect public safety and the environment.

Apopka Rodent Outbreak Project

In the fall of 2006, Orange County Health Department (OCHD) reported an outbreak of mice in the Apopka area and assembled a multi-agency effort to control the nuisance rodents. SES provided information on the relative risks of registered rodenticides and guidance on the proper use of pesticides

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to maximize their effectiveness while avoiding non-target impacts. The control efforts implemented led to a progressive decline in mouse numbers while minimizing incidents of secondary poisonings of hawks, owls, and other predators of mice.

Reregistration Eligibility Decision (RED) Document on the Organic Arsenical Herbicides

In June 2006, the Department submitted comments to the EPA's public docket regarding the reregistration of organic arsenical herbicides (OAH). The Department's comments focused on the unique conditions in Florida that make the state's ground water particularly vulnerable to leaching chemicals and the potential risks to human health from inorganic arsenic released from these herbicides. In August 2006, the EPA issued a preliminary conclusion that these active ingredients were not eligible for reregistration based on increased cancer risks from consumption of inorganic arsenic in potable surface water. Department staff reviewed the agency's risk assessments and, in December, submitted a second set of comments supporting the agency's decision. The Department has since met with an EPA assistant administrator to express concerns related to water quality and to describe the Department's efforts to have the registrants of OAH test for potential impacts to water quality in Florida.

Reregistration Eligibility Decision (RED) Document on Aldicarb and Other Pesticides

In 2006, the EPA released their revised dietary and drinking water risk assessment on aldicarb as part of the RED process. More recently, the EPA recommended expanding potable well buffer zones for use in peanuts. SES reviewed the Agency's modeling inputs and provided contrasts to those projections with monitoring data from Florida. The

Department anticipates the release of the RED in fall of 2007.

Other REDs and Inquiry Responses

In addition to the pesticides mentioned above, SES also reviewed the EPA RED documents for atrazine, chloropiricrin, copper pesticides, cypermethrin, malathion, MCPB, permethrin, piperonyl butoxide, pyrethrin, resmethrin, simazine, and the nine active ingredients included in the EPA rodenticides cluster. In addition, staff conducted fate and effects reviews on the following active ingredients in response to inquiries from the public and/or government agencies:

acephate
aluminum phosphide
aminopterin
bifenazate
bifenthrin
boric acid
carbofuran
clopyralid
copper cyhalothrin
DDT
esfenvalerate
fenbuconazole
fipronil
glyphosate
melamine
MGK 264
mirex
noviflumuron
permethrin
PBO
propoxur
pyrethrin
sulfuryl fluoride
triclopyr

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Ground Water Protection

Lake Wales Ridge Monitoring Network

The Lake Wales Ridge Monitor Well Network (LWRMN) in Polk and Highlands counties is a collaborative project between the Department, the U.S. Geological Survey (USGS), and the Southwest Florida Water Management District. Each of 30 monitoring wells taps shallow ground water in sandy soils that are highly prone to leaching; the wells are located immediately adjacent to citrus groves and represent high-vulnerability scenarios for ground water contamination. Since the network's inception in 1999, the existing 30 shallow ground water wells have been sampled quarterly and analyzed for a suite of agricultural chemicals.

The LWRMN allows the Department to evaluate the relationship between agrichemicals and ground water quality in an area that is highly susceptible to leaching chemicals. It provides information on the fate of agrichemicals in vulnerable Florida soils and provides an early indication of potential future drinking water threats. Further information on the LWRMN can be located at the USGS web site for the project, http://fisc.er.usgs.gov/Lake_Wales_Ridge/index.html.

Data from the network has been presented at several water quality conferences, published in peer-reviewed journals, and cited in the USGS National Water Quality Assessment Program. In addition, much of the data has been provided to the EPA in support of the agency's reregistration review efforts or has initiated discussions with pesticide registrants on the fate and risk of an active ingredient. The data from the network has also stimulated potable well testing in the vicinity of these groves to ensure the safety of the public.



This year, the Department and USGS began efforts to expand the LWRMN to include wells located in regions of Polk and Highlands counties not associated with citrus. The planned expansion will allow the Department to evaluate the potential impact of other land uses (e.g., golf courses, residential) on ground water quality.

1,3-Dichloropropene Ground Water Study

Study coordinators moved ahead on the design and implementation of a study to evaluate the risks the soil fumigant Curfew (1,3-dichloropropene) may pose to ground water quality. The registrant has selected a site at a golf course in the Central Ridge region of Florida, where Curfew had been applied and was scheduled for reapplication in 2007. SES and the registrant conducted site characterization and attended the most recent fumigant application, recording the treatment boundaries to aid in identifying locations for the eight monitoring wells. The study will determine whether the mandated 100-foot application setback from potable wells is sufficient to protect drinking water resources. Quarterly groundwater sampling is proposed for at least two years; Curfew will be applied annually for the duration.

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Thiamethoxam Retrospective Ground Water Study

In June 2005, Syngenta Crop Protection initiated a retrospective ground water study of the insecticide thiamethoxam. The study is being conducted at the Department's request at 12 vegetable fields in Hamilton, Suwannee, and Manatee counties. Each of the fields had received at least two thiamethoxam applications prior to initiation of the study. Shallow and deep groundwater monitoring wells are sampled quarterly and analyzed for thiamethoxam and three degradation products. The Department has overseen many of the sampling events and reviews the progress of the study through regularly submitted updates. The study will continue through June 2008.

Surface Water Protection

Caloosahatchee River Basin Monitoring Project

In December 2006, the Florida Department of Environmental Protection (DEP) collected the final sample for the Caloosahatchee River monitoring project. This cooperative effort between SFWMD, FDEP, and the Department was initiated in December 2005. It was designed to generate data to: (1) meet the requirements of the DEP's rule for Total Maximum Daily Loads; (2) assess potential impacts to non-target organisms; and, (3) establish a baseline for evaluating the effectiveness of agricultural Best Management Practices which may be implemented in the future. The sample locations were chosen to evaluate the potential impact of three types of land-use (citrus groves, sugar cane fields, and residential areas). Monthly samples included grab samples from six locations in tributaries or canals and three 48-hour composite samples from canals. Over all, the frequency and concentrations of pesticide detections were very low. All concen-

trations except one were below levels of concern for fish and aquatic invertebrates and were consistent with findings from other monitoring programs within Florida. The Department anticipates reviewing a final report in mid-2007, with the preparation of peer-reviewed manuscripts likely to follow.

Review of Surface Water Monitoring Programs

In addition to actively participating in surface water studies, SES continues to review pesticide monitoring data from various local, state and federal agencies. Given the Department's limited budget for monitoring surface waters, these alternate programs are useful in identifying potentially problematic pesticides. Outside agency efforts include activities conducted by Lee County, Collier County Pollution Control and Prevention Division, the South Florida Water Management District, and the U.S. Geological Survey.

Endangered Species Protection Program

U.S. Environmental Protection Agency "Bulletins Live!"

In the fall of 2006, the EPA held the National Partner's meeting to update the states on the progress of the federal Endangered Species Protection Program (ESPP). Beginning in 2007, the following statement will be found on product labels with active ingredients that may impact federally listed species:

"This product may have effects on endangered species. When using this product, you must follow the measures contained in the Endangered Species Protection Bulletin for the county in which you are applying the product. To obtain Bulletins, consult www.epa.gov/espp, or call 1-800-447-3813 no more

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than six months before using this product.”

EPA anticipates the new ESPP web site (www.epa.gov/espp/bulletins.htm) will be available to the public in fall 2007 and will allow users to download Endangered Species Protection Bulletins. Using the new “Bulletins Live!” system, the pesticide user will select their state and county where they plan on applying the product that has the above label statement. The user will then be able to retrieve the Bulletin which will provide maps of pesticide use limitation areas and provide any use restrictions for that specific active ingredient to protect endangered species in that region.

SES anticipates being an active partner with the EPA in providing information on endangered species habitat and location, crop and pesticide use, and risk management options for protecting endangered species from a pesticide. In addition, SES will be responsible for providing outreach and education to pesticide users and the general public.

Mosquito Control and the Miami Blue Butterfly

The Miami Blue Butterfly (MBB) is an endemic species to Florida that until recently was thought to be extinct. University of Florida (UF) researchers and the FFWCC are working to reintroduce the Miami Blue in North Key Largo. Efforts to reintroduce the butterfly near more populated areas have created potential conflicts with mosquito control programs.

This year, the Department worked with other scientists on the Miami Blue subcommittee to make recommendations to the Florida Coordinating Council for Mosquito Control (FCCMC) that will: (1) allow re-introductions of the Miami Blue to continue; and (2) allow the Mosquito Control Districts to continue to provide mosquito control as required by Chapter



388, F.S. In addition, SES has collaborated with University of Florida staff to evaluate the impact of mosquito aerial adulticides on the MBB larvae.

Assessing the Impact of ULV Application of Permethrin on Non-Target Aquatic Species

In Florida, the application of permethrin aerially for mosquito control is prohibited without the consent of the Department. This restriction is based on risks to aquatic organisms from aerial application. Recently, SES has worked with the FCCMC to review the relevance of this restriction. The Department's efforts included evaluating the persistence and toxicity of permethrin and working with university researchers to measure the deposition of permethrin and the risks to non-target organisms. In the past year, SES assisted in the performance of field studies on the impact of permethrin on non-target species (i.e., fish) following ULV aerial application. Once a sufficient data set is developed, the Department will present this data to the FCCMC and evaluate the status of this use restriction.

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Miscellaneous

Pesticide Usage Information

Chapter 487.160, F.S., mandates that every three years the Department report on the use of Restricted Use Pesticides (RUP) in the state and also report the number of cases of RUP misuse, damage, or injury. However, the Department has expanded the report in the past to include use of general-use pesticides and mosquito control use. For the upcoming report, SES evaluated whether a more functional and interactive web-based format could be employed that would employ a searchable database and allow users to access crop and pesticide use information.

Staff have begun compiling data from the most recent National Agricultural Statistics Service and Florida Agricultural Statistics Service reports on pesticide use information and on county-wide production for fruits and commercial citrus grown in Florida. They have developed a database that should simplify the development of a web-based tool. The Department anticipates release of the web-based report in late 2007.

Training

SES continues to attend programs and meetings to upgrade technical skills and gain knowledge about the latest topics related to environmental toxicology, risk assessment, risk mitigation, and risk communication. This year, staff attended the annual meetings of the Society of Toxicology and Environmental Chemistry, and the Society of Toxicology, and attended training on DEP's Integrated Watershed Monitoring Program, Exposure Modeling, Spray Drift, and Geographical Information Systems. In addition, staff represented the Department at the

following EPA Pesticide Regulatory Educational Program courses: Pesticides and Water Quality; and Risk Communication.

Pesticide Registration

The Pesticide Registration Section registers pesticides that are distributed, sold, or offered for sale in Florida. During fiscal year 2006-2007, 18,839 pesticide brands were registered for sale and distribution in Florida. Approximately \$3.7 million in registration fees was collected to support the Department's pesticide programs.

Pesticide Registration Evaluation Committee

Included in pesticide registration activities were reviews for special registration actions such as Experimental Use Permits, Special Local Need, New Active Ingredient, and Significant New Use registrations. These special registrations are reviewed by the Department and other affected state agencies through the Pesticide Registration and Evaluation Committee (PREC), a consensus-determining group that is responsible for evaluating pesticides, advising the Department of risks associated with the proposed use of the pesticides, and proposing solutions or actions for reducing risks to acceptable levels. The Registration Section's professional staff serves as both liaison and active participants in the PREC process. This year, the Committee convened on 10 occasions to evaluate the following: six Special Local Need registrations, eight Experimental Use Permits, five Significant New Use, and 14 New Active Ingredient registrations.

Emergency Exemptions

Florida's diverse agricultural system, mild climate, and tourism/trade activities make the state particu-

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larly susceptible to the introduction and proliferation of pests. When an emergency condition arises and no effective registered pesticides are available to control a new pest or avert an anticipated significant economic loss due to an urgent and non-routine pest problem, the Department may submit petitions to the EPA for emergency exemptions from registration. Pest emergencies often involve introduced pest species of foreign origin, such as invasive insects, weeds, and plant diseases with the potential to inflict millions of dollars of losses in affected crops and commodities. Exemption requests frequently seek the use of new, low-risk chemicals that may actually decrease the total use of chemicals on the affected crops through their compatibility with integrated pest management programs and by eliminating or reducing repeated applications of broad-spectrum pesticides of limited efficacy. Further, these new chemistries usually have better environmental fate and non-target toxicity profiles than many of the older chemicals they are replacing.

The approval of emergency-use exemptions is a critical part of the Department's efforts to assure the long-term viability of Florida's specialty crop producers and continued agro-economic development. The process provides important crop protection tools that maintain Florida's competitiveness in key domestic and international markets.

With the Department's technical support, the EPA issued five emergency exemptions for pesticide use in Florida during fiscal year 2006-2007. The Department also continued its participation in Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Section 18 improvements by submitting the first petition based on recertification under a new federal rule adopted March 28, 2006.

The Department requested that the EPA recertify Florida's exemptions for the use of the fungicide thiophanate-methyl to control *Fusarium* "hardlock" in cotton, postbloom fruit drop in citrus, and white mold in fruiting vegetables. A repeat exemption request for the use of fenbuconazole in controlling greasy spot in grapefruit was not necessary this year since EPA granted federal registration to fenbuconazole for this use.

The Pesticide Registration Section consulted with the beekeeping industry and the Department's Division of Plant Industry to obtain the ninth consecutive approval for the use of coumaphos to control the small hive beetle and varroa mite in honeybee colonies. After coumaphos-resistant mite populations were documented, the Department successfully petitioned EPA for the use of an alternative product containing thymol, eucalyptus oil, and L-menthol for control of this devastating pest. The Department continues to work with industry representatives, university Extension specialists, and federal agencies as new challenges, such as Colony Collapse Disorder (CCD), confront the entire beekeeping industry.

Florida's agricultural sector remains vigilant in its preparations for the potential threat of the pest Australasian soybean rust (ASR) (*Phakopsora pachyrhizi*). The Florida industry was granted quarantine exemptions for the use of myclobutanil, tebuconazole, propiconazole, azoxystrobin, and pyraclostrobin to protect specialty leguminous crops (Crop Group 6) from this fungal disease. To date, Florida's soybean industry has not suffered significant losses from ASR. These quarantine exemptions will expire in November 2007. The Department expects to petition EPA for a three-year renewal.

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Naled was granted a three-year (September 22, 2005, through September 22, 2008) quarantine exemption by the EPA after Florida made the case for continuing to protect various sites from potential destruction caused by tephritid fruit flies.

An aquatic herbicide emergency exemption for penoxsulam was sought by the Department to assist other state and federal agencies in their efforts to prevent the spread of fluridone-resistant strains of the invasive aquatic weed hydrilla. EPA granted the exemption (2006) request for 100,000 aquatic acres in the sovereign waters of Florida and issued an expiration date of May 31, 2007. The chemical provided successful control of hydrilla.

Registration Tracking System (RTS)

The Pesticide Registration Section successfully completed the process of updating the 2006-2007 product brand registration information into RTS. The section continued with Registration Tracking System training for internal headquarters staff and enforcement field staff. In January 2007, RTS administrators provided a localized desk top database for field inspection staff in the Bureau of Compliance Monitoring. This new database version allows field staff to search current product registrations by company, EPA registration number, and product brand name. In addition, it accommodates updates of their active pesticide product brand list at the user's convenience.

The section also assisted the Bureau of Compliance Monitoring in the creation of its Pesticide Use Permitting System (PUPS), adding this module to RTS to assist these efforts. The PUPS focuses on tracking permits for a single pesticide active ingredient, but it will have the capability to track other active ingredients whenever the need to do so is

identified by the Department.

The 2006 limited-production run for the new "e-gov" credit/debit card system was fully implemented by 2007 to allow access by all pesticide registrants for payment of both new and renewed product brands. The tutorial for using the e-gov system has been updated this year based on customer comments and suggestions. In a related effort to improve services, the Registration Section is participating in a national e-label pilot project entitled ALSTAR (Accepted Label State Tracking and Repository). This e-label project is being coordinated with six other state registration programs through the National Pesticide Information Retrieval System and is designed to make pesticide labels available online. Also, the RTS has been upgraded to allow for the collection and posting of fees for both late product brand payment and biennial registrations beginning in 2008 and 2009, respectively. The Florida Legislature approved a program request for late fees and biennial registrations during the 2007 session.

The RTS was subjected to an audit by the Department's Office of the Inspector General. Most of the internal audit was concentrated in the areas of SOPs to support the generation and reproduction of performance figures and system reports to track fee transfers. The system was given an excellent report by the audit team.

Pesticide Laboratory

The Department's Pesticide Laboratory analyzes a variety of official samples, including formulated pesticide products, pesticide application tank mixes, and environmental samples to support compliance investigations and pesticide management activities. Formulation analyses are performed in accordance with Florida Statutes for label guarantee, and tank-

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mix sample analyses are performed to assess the use percentages of the active ingredient. A total of 126 formulation and/or tank-mix samples were analyzed, requiring 3,133 sample determinations to verify whether the percentages of guaranteed active ingredients were within allowable tolerances. The rate of violations encountered for product formulations testing this past year was 9.2 percent (last year's violation rate was 6.3 percent and the previous year's violation rate was 3.8 percent). A directed approach to sampling formulated products, which was developed jointly by the Pesticide Laboratory and the Bureau of Compliance Monitoring, was utilized this year. The directed approach program enables the Department to be able to test a wider scope of products, in a variety of categories, to ensure public safety and minimize environmental impacts. This approach has also improved the Department's ability to focus on pesticide products that may not be in compliance with guarantee tolerances.

In support of registration, compliance, and technical assessment activities, 549 environmental samples were analyzed, requiring 54,812 determinations. The laboratory also responded to a wide variety of method development requests and increased its screening capabilities during the past year. Method

development work for individual compounds and related analyses was conducted in a variety of environmental matrices (e.g., soil, water, vegetation). In addition, method development work began in the area of fumigant and air quality analysis techniques utilizing Thermal Desorption and Purge/Trap sample introduction techniques with Gas Chromatographic/Mass Spectrometric capabilities.

To ensure a high quality of analysis, the laboratory analyzed 1,294 quality control samples, requiring 34,748 determinations. Quality assurance samples were analyzed for method development and validation as well as for control of routine sample analyses. The laboratory's technical training program continues to include quarterly in-house proficiency samples. Further, the laboratory is actively involved in revising and preparing all of its Standard Operating Procedures in preparation for applying for ISO 17025 Laboratory Accreditation.

The laboratory reported significantly more sample determinations during fiscal year 2006-2007 (92,693) than were reported for fiscal year 2005-2006 (59,572). The total number of samples analyzed during fiscal year 2006-2007 (1,969) was also more than the number analyzed during fiscal year 2005-2006 (1,347). However, the 2005-2006 reported samples and determinations were for a period of nine months of analytical operations due to a three-month laboratory shutdown for the laboratory complex HVAC installation project. The main reason for the overall increase in determinations (over the past two years) continues to be due to the quantity of pesticide screens requested by the pesticide program areas.

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The Laboratory Section received a Davis Productivity Award in 2007 for implementation of the Laboratory Information Management System (LIMS). The award recognized the substantial benefits of the LIMS, including increased accuracy, heightened efficiency, and reduction of data entry workloads by 50 percent. The laboratory continued to enhance the LIMS over the course of fiscal year 2006-2007, upgrading the platform from Access to Oracle. This automated electronic sample processing software will continue to allow the laboratory's customers to navigate and track all sample analysis activities, further improving the overall quality and efficiency of data generated for the laboratory's customers.

Pesticide Certification and Licensing

The Pesticide Certification and Licensing Program helps to ensure a safe food supply, healthy environment, and the protection of workers and the public through training and competency testing of pesticide users. This program is coordinated with the EPA and the University of Florida to ensure consistency in educational efforts and certification standards. EPA has approved the Department's program as meeting federal pesticide applicator certification requirements, and EPA staff provides limited guidance and program assistance as needed. UF assists by developing training manuals and certification exams, providing training classes and workshops, and administering the majority of the certification exams.

In fiscal year 2006-2007, the Department issued or renewed 2,842 pesticide applicator licenses and 404 pesticide dealer licenses. The total number of active licenses as of June 30, 2007, was 11,788. Department staff approved 1,446 pesticide training programs to issue continuing education units (CEUs) for pesticide applicator recertification and license renewal, making available 4,436.5 CEUs for

license renewal. An online CEU class search is available to help pesticide applicators locate training opportunities that provide CEUs. Department staff also monitored 99 hours of training classes throughout the state and gave nine presentations on pesticide laws and regulations, licensing requirements, and procedures relevant to pesticide use.

Aldicarb Permit Program

The Aldicarb Permit Program tracks the use of the restricted-use pesticide aldicarb (Temik) in Florida to ensure protection of ground water from contamination with aldicarb residues. All uses of aldicarb must be approved prior to application, and soil type and wells must be identified for each application site before permits are issued. In fiscal year 2006-2007, the Department issued permits for aldicarb to be applied to 5,100 sites in Florida, including 506,116 acres of citrus, 29,405 acres of potatoes, 20,598 acres of peanuts, 5,064 acres of cotton, 230 acres of pecans, and 40 acres of grain sorghum. Permit applications may be submitted by fax or mail or online at www.temikpermit.com. Information about the aldicarb program and permit applications are available on the Department web site at www.flaes.org.

Aircraft Registration Program

The Department administers a registration program for aircraft used to apply or dispense pesticides, fertilizer, and seed. Aircraft owners/operators are required to register all aircraft used and must also report to the Department all sales, purchases, leases, and other transactions involving these aircraft. As of June 30, 2007, there were 159 aircraft registered. The number registered to apply each of the following products is as follows: 71 public health pesticides; 41 agricultural pesticides; 22 fertilizer;

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18 seed. In addition, four aircraft are voluntarily registered to apply oral rabies vaccine baits.

Worker Protection Program

The Department uses a multifaceted approach to protect agricultural workers from pesticide hazards. Certification and licensing is required of individuals who use restricted-use pesticides to ensure they are aware of pesticide safety requirements and are competent to use pesticides properly. Since the inception of the program, the Department has certified and licensed over 7,500 individuals to use restricted-use pesticides in agricultural sites, and there are currently over 11,000 individuals licensed. Also, licensed pesticide applicators are required to train their unlicensed assistants on pesticide safety before restricted-use pesticides are handled.

The Department enforces the federal Worker Protection Standard (WPS) in Florida, which requires pesticide safety training for all agricultural pesticide handlers and agricultural workers who work at agricultural sites where pesticides have been applied in the last 30 days. The training must include information on how pesticides enter the body and how to prevent pesticide exposure. Since the inception of the program, 2,152 individuals have been certified to conduct WPS pesticide safety training. A total of 57,110 EPA worker cards and 8,555 EPA handler cards have been issued to certified trainers to issue to individuals they train. The EPA card system is voluntary and the numbers do not represent the total number of individuals trained. This year a new database/training program for the Train the Trainers was implemented to provide better reporting information.

The Florida Agricultural Worker Safety Act (FAWSA) is also enforced by the Department and requires

agricultural employers to provide a fact sheet or Material Safety Data Sheet (MSDS) to agricultural workers upon request so workers will know the hazards of pesticides they may be exposed to in the work place. Under FAWSA requirements, the Department also makes available a pesticide safety sheet in English, Spanish, and Creole/Haitian with illustrated instructions on preventing pesticide exposure and a toll-free telephone number for the Florida Poison Control Centers. To date, over 46,000 pesticide safety sheets have been distributed by the Department to assist pesticide safety trainers. The safety sheet can also be downloaded from the Department's web site at www.flaes.org/complimonitoring/workersafety/index.html.

During the 2006-2007 fiscal year, the Department conducted 957 Worker Protection Standard (WPS) inspections at farms, forests, nurseries, and greenhouses. Two hundred seventy-eight, or 29 percent, of these inspections identified violations of the Worker Protection Standard, and a total of 510 violations were identified for the year.

In addition to enforcing the worker protection standards set out under state and federal law, the Department conducts education and outreach programs for agricultural workers. Sessions are conducted to educate workers about pesticides, and a bilingual outreach educator is available to meet with workers as needed. In addition, the Department conducts "train the trainer" programs in order to reach more workers through the help of other workers and worker organizations.

The Department strongly encourages workers to seek immediate medical attention if they believe they have been harmed by pesticides while working. Workers are also encouraged to promptly report potential violations of the WPS to the Department

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for investigation and response. Under the WPS, workers must be notified about treated areas so they may avoid inadvertent exposures; handlers and workers must be supplied with water, soap, and towels for routine washing and emergency decontamination; transportation must be made available to a medical care facility if a worker or handler may have been poisoned or injured; and information must be provided about the pesticide to which the worker may have been exposed. Additionally, personal protective equipment must be provided and maintained for handlers and early-entry workers; safety training is required for all workers and handlers; a pesticide safety poster must be displayed; handlers and workers must be informed of pesticide label requirements; and central posting of recent pesticide applications must be displayed.

Pesticide Regulation

The Pesticide Compliance Section helps ensure that pesticides are used correctly and according to the rules and laws developed to protect consumers, the environment, and the food supply. Three hundred and six specific complaints, tips, and allegations were investigated. Samples were collected of various pesticides to assure that they were formulated correctly and contained precisely what their labels guaranteed. Allegations concerning pesticides drifting from a targeted area onto other non-target areas were investigated, and samples of soil, water, and vegetation were collected from the areas in question and analyzed. Fish, bird, and animal deaths allegedly caused by pesticides were investigated. Claims of pesticide exposure were investigated, including claims of pesticide exposure to farm workers. Section staff worked to ensure that the Worker Protection Standard was followed on various agricultural establishments throughout the state. Investigations were also conducted to

ensure that pesticides imported into Florida were properly registered and allowed to be used. Additionally, staff from the Bureau of Compliance Section checked on the production of wood treated with chromated copper arsonate (CCA). The bureau also coordinated with the Florida Department of Environmental Protection to conduct "Operation CleanSweep," a mobile pesticide collection program that provides a safe way to dispose of canceled, suspended, and unusable pesticides at no cost. This program collected 68,994 pounds of pesticides in fiscal year 2006-2007 and surpassed the 1 million-pound mark for the total collected since the program began in 2000.

For the 2006-2007 fiscal year, the Department conducted 1,535 pesticide inspections at agricultural, non-agricultural, and product-related establishments. Three hundred seventy-two, or 24 percent, of these inspections identified violations of the Florida Pesticide Law, and a total of 859 violations were identified for the year. The Department issued 409 enforcement actions regarding these violations, 109 of which were administrative fines. The Department assessed \$54,150 in fines and collected \$69,323 in fine money during the 2006-2007 fiscal year (some fines from previous years were paid in this fiscal year).

Some of the more common violations identified during the inspection process include 510 violations of the Worker Protection Standard, 55 violations of lack of personal protective equipment, 12 unregistered pesticides, 17 misbranded pesticides, 40 incomplete applicator records, 20 restricted-use/purchase violations, and seven pesticide drift violations.

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Pest Control Program

The Pest Control Enforcement Section investigated 535 consumer complaints and conducted 3,361 licensed business inspections. Enforcement activities for the year resulted in the issuance of 476 enforcement actions and the imposition of \$195,250 in fines. In addition to the fines that were issued, the bureau also revoked five Pest Control Operator Certificates and one Pest Control Business License (three of which were surrendered voluntarily), suspended two business licenses, placed two business licensees on probation, issued 130 warning letters, 62 advisory notices, and 90 cease-and-desist orders, and conducted 63 informal hearings. The Bureau of Entomology and Pest Control also developed a risk-based enforcement policy that focused its efforts on illegal pest control in Florida. The new policy resulted in taking 99 enforcement actions (20 percent of the total enforcement actions) against illegal pest control operators. Moreover, fine amount assessed against the illegal operators totaled \$103,525, which represents approximately 53 percent of the total fines issued through its enforcement activities. The bureau added a second Agricultural Law Enforcement Officer, who will further assist field enforcement staff with illegal pest control activities and protect consumers against criminal pest control perpetrated by illegal operators or licensed pest control companies.

The Bureau of Entomology and Pest Control's Document Issuance Section is responsible for issuing documents such as licenses, permits, certificates, and identification cards to approximately 55,000 members of the pest control industry. The bureau issued or renewed 4,503 business licenses, 8,503 certified operator's certificates, 37,947 employee identification cards, and 3,466 limited governmental/private and limited lawn maintenance certificates.

Additionally, certification examinations were administered to 2,493 applicants. The section is currently working to enhance its capabilities through the development of an electronic document filing system. Once completed, this enhancement will provide bureau personnel with the ability to search and obtain documents and information electronically, eliminating the need to perform this task manually and eliminating the need for storage space to house document filing cabinets.

The bureau continued its efforts to work with the pest control industry with the development of new statutory requirements in several sectors of the pest control industry. Regulations were modified to address automated misting pesticide devices and independent contracting of employees. Continued efforts in fumigation safety, contracts for preventive termite treatments for new construction, and compliance with the commercial landscape maintenance industry were additional areas of interest. The bureau, assisted by division management, is committed to continuing the efforts to work with the pest control industry to address consumer-related issues as well as industry issues. The bureau conducts regular workshops with the industry to modify statutes and rules to provide clear guidance to the regulated industry.

Mosquito Control Program

The Department held three meetings of the Florida Coordinating Council on Mosquito Control during fiscal year 2006-2007. Some of the issues considered included use of permethrin for aerial application, establishment of the Miami Blue butterfly study in the Florida Keys, the use of monomolecular film on state lands, and Department mosquito control research grants.

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There were 16 Public Health Pest Control certification training sessions provided throughout the state, and 416 certificates were issued or renewed. Active licenses for the section include 1,521 Public Health Pest Control certified applicators and 101 Aerial Public Health applicators. The Department awarded \$1,802,000 in mosquito control aid to the districts in fiscal year 2006-2007, and allocated \$250,000 for mosquito control research through its competitive grants program.

Operational Support – Dog Fly Program

Operational Support completed 23 inspections, including one complaint, regarding mosquito control activities. No enforcement actions were taken as a result of these investigations. During the reporting period, 16 dog fly control missions were conducted, covering 81,875 acres and applying 319.8 gallons of pesticide (Dibrom). There were no mosquito control missions during this fiscal year.

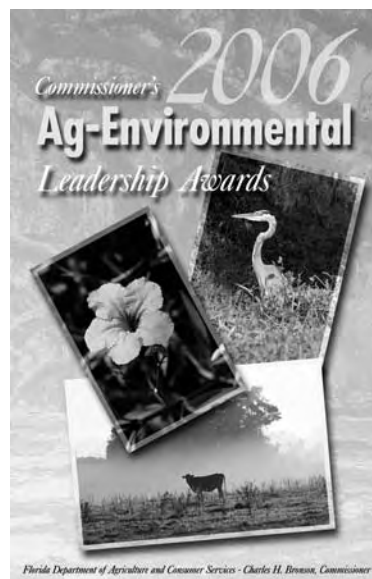
Mosquito Control Incident Response Team

Due to limited hurricane activity, the MCIRT was not activated during the 2006-2007 fiscal year. However, the team conducted three separate table-top exercises with a number of the state's mosquito control districts in an effort to remain prepared in the event of hurricane storm events.

Agricultural Environmental Leadership Awards Program

The 13th annual Commissioner's Agricultural-Environmental Leadership Awards were presented to three Florida agricultural operations in recognition of their leadership in promoting progressive environmental practices. The presentation took place

at the Florida Farm Bureau's annual convention in Daytona Beach on October 13, 2006.



The three winners were selected from the group of finalists by a selection committee made up of representatives from the Nature Conservancy; the state's Water Management Districts; the Florida Farm Bureau; the Florida Cattlemen's Association; the Florida Dairy Association; the Florida Department of Environmental Protection; the Florida Nursery, Growers and Landscape Association; the Florida Fruit and Vegetable Association; the Florida Citrus Mutual; and the Florida Forestry Association. The 2006 winners were:

- Lightsey Cattle Company in Lake Wales. The Lightsey Cattle Company is made up of four separate ranches: Tiger Lake Ranch and West Lake Wales Ranch in Polk County, the XL Ranch in Highlands County, and Brahma Island in Osceola County. The Lightsey family also leases five other ranches where they raise cattle. Working closely with the Florida Fish and Wildlife

Conserving the Natural Environment

Conservation Commission, the Lightseys helped develop criteria for guided hunting that is now the standard for Florida for hunting preserves throughout the state.

The Lightsey family was the first to partner with the Nature Conservancy on a pilot program called Florida Lands and Outstanding Waters, or FLOW. The Lightseys were chosen by the Archbold Biological Station – an independent non-profit organization specializing in ecological research and conservation – to partner in the restoration of a 3,500-acre reserve adjacent to the XL Ranch. Other important conservation practices include rotational grazing and controlled pasture burning.

Perhaps the most significant contribution the Lightseys have made toward the preservation of their land is the establishment of conservation easements. Government agencies or conservation groups buy the rights to keep the land from ever being developed. Today, nearly 70 percent of all the Lightseys' property is in easements preserving the land, wildlife, and Florida's history.

- Tampa Wholesale Nursery in Dover. Tampa Wholesale Nursery raises over 120 different varieties of plants, from ground covers to shade trees, shipping more than 300,000 plants throughout the Southeast each year. The nursery was one of the first to incorporate low-volume irrigation, greatly reducing water usage. The nursery is also partnered with Tampa Bay Fisheries, utilizing the excess water from its packaging plant to irrigate. Since implementing this partnership, the amount of water the nursery draws from the aquifer has decreased by 40 percent.

The nursery mixes its own potting soil using pine bark and other byproducts of pulpwood mills as well as composted yard waste. The plastic pots are reused by the nursery, and it offers a credit to customers who return them, reducing solid waste that would normally go into the landfill.

Tampa Wholesale Nursery incorporates Best Management Practices throughout the operation, including Integrated Pest Management. Employees scout for pests and diseases on a routine basis and use spot treatments, reducing the use of pesticides.

- Riverview Flower Farm in Riverview. This operation encompasses 127 acres at three locations. To reach their goal of helping novice gardeners, the company took plants that people had been successful with in Florida and combined them into a cohesive package labeled Florida Friendly Plants™. To identify the plants that grow well in Florida, the nursery conducted more than 10,000 trials seeing how each did under local climatic conditions as well as with disease and pest resistance.

Early on, Riverview moved away from an inefficient, overhead irrigation system and turned to drip-tube fertigation, resulting in a 95 percent reduction in water use. In addition to saving water, the delivery of water directly to the base of the plant reduces the risk of disease and minimizes the use of pesticides. To keep destructive insects from building up resistance to pesticides, Riverview rotates the use of traditional products with low-impact organic repellants. Using these organic mixtures results in a safer workplace and a safer product for the customer.

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Riverview Flower Farms has implemented a number of new techniques. Capillary mats, which hold liquid much like a sponge, allow plants to absorb water and liquid fertilizer through their roots, further reducing water use and runoff. To avoid the waste of overhead watering during a freeze, frost cloth is used to protect the plants in the winter months; in the summer, the nursery uses aluminized shade cloth to keep the shade houses 20 degrees cooler.

Division of Forestry

Forestry Programs

Wildfires

There was an increase in the number of wildfires from the previous fiscal year. There were 4,520 wildfires in fiscal year 2006-2007 as compared



to 4,028 wildfires in fiscal year 2005-2006. The number of human-caused wildfires was down from 3,373 in fiscal year 2005-2006 to 3,363 in fiscal year 2006-2007 even though drought conditions were much worse and the fire danger was much higher in fiscal year 2006-2007.

The reduction in the number of human-caused wildfires can be attributed to an aggressive wildfire prevention campaign in the spring of 2007. Ninety-nine percent of all wildfires during the third quarter (January-March) of fiscal year 2006-2007 were caused by humans. During the fourth quarter (April-May) of fiscal year 2006-2007, only 40 percent of all wildfires were caused by humans. March through May is normally the most active part of Florida's year-round wildfire season. The leading cause of wildfires in fiscal year 2006-2007 was lightning, which accounted for 1,157 fires, followed by debris burning, which accounted for 919 fires.

The Division of Forestry received two Franklin awards, one for the statewide fire prevention campaign in the use of state fire assistance grants, and the other for the federal excess property program in providing surplus federal property to volunteer fire departments. The U.S. Forest Service awards one Franklin award nationally each year in three different categories: volunteer fire assistance, state fire assistance grants, and the federal excess property program. The Division of Forestry received two of the three national awards this past year.

Forest Protection

Division of Forestry personnel made 12,267 media contacts this year as part of the division's public education campaign on wildfire prevention. In addition, 10 Wildfire Mitigation Specialists prepared 228 local press releases for daily and weekly newspa-

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pers. The emphasis this year was on woods arson awareness, children-caused fires, and the prevention of wildfires from escaped yard-waste fires.

From March through June, the division ran an intensive statewide radio campaign with three wildfire prevention announcements. Two 30-second spots focused on “Know the Law before You Burn” and “You May See an Arsonist at Work,” and one 60-second radio spot provided listeners with tips on “How to Have a Firewise Home.” The radio spots were broadcast for 12 weeks during the most active portion of Florida’s wildfire season on more than 55 affiliate radio stations, reaching an estimated 3 million people.

Four individuals from the Division of Forestry were selected to be speakers at the National Firewise Conference titled “Backyards and Beyond” in Denver on November 4-6, 2006. During the conference awards ceremony, Wildfire Mitigation Coordinator Jim Harrell was presented with a Firewise Leadership Award for his work in helping make Firewise Communities a success in the Southern Region.

During fiscal year 2006-2007, Firewise workshops and wildfire prevention teacher workshops were conducted by vendor Pandion Systems, Inc., and funded by a U.S. Forest Service Hurricane Supplemental Grant. Pandion Systems, Inc. hosted:

“Living on the Edge in Florida” Firewise decision-maker workshops	8
“How To Have A Firewise Home” workshops for homeowners	24
Firewise educator workshops	2
Firewise presentations for other audiences	3
Wildfire prevention teachers’ workshops	10

In addition, Division of Forestry personnel made 216 presentations on wildfire prevention and community wildfire protection to audiences totaling 5,751.

Twelve Florida communities met the requirements and were accepted into the Firewise Community/USA recognition program. Ten existing Firewise Community/USAs were recertified in 2006 and continued in the national recognition program. Twenty-two Florida communities have now been accepted into this national recognition program for the initiatives they have taken in community wildfire protection.

Mitigation specialist accomplishments:

Radio contacts	3,204
Television contacts	5,003
Newspaper contacts	4,060
Homes visited door-to-door	5,685
Presentations to 5,751 attendees	216
Arson Alert signs posted	1,160
News releases prepared	228
Fliers/brochures distributed	59,768
Local workshops for 879 participants	28
Wildfire hazard assessments completed	66

The billboard and movie theater advertising campaign ran from March through June during the most active part of wildfire season. Smokey Bear and his messages “Only You Can Prevent Wildfires,” “Think Before You Burn,” and “Hurricane Debris = Wildfire Fuel” focused on the issues of escaped debris burning and on the wildfire danger that still exists from debris left over from the 2004 and 2005 hurricane seasons. A new billboard, “Woods Arson is Not a Victimless Crime,” was developed to reduce the threat of woods arson. These messages were used statewide on 16 billboards that were leased for a two-month period and in movie theater ads

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that played on 617 screens before each movie for a six-week period. Sixty-seven theaters showed the ads as free lobby advertising on plasma TV screens, and over half of the billboards from the previous two years are still in place as an additional source of free advertising. The movie theater ads were extended an additional three weeks during the height of the wildfire season at no cost to the Division of Forestry, resulting in several thousand dollars worth of free public service advertising on wildfire prevention.

The statewide Fire Danger Weather Campaign was again used during Wildfire Awareness Week in April. Sixteen television stations participated in the campaign by reading a weather-related question on the air during the weather portion of the newscast. Viewers were then directed to go to the television web site and click on the Division of Forestry link to answer the question and be eligible to win a fire danger weather kit. The kits contained a rain gauge, thermometer, calendar, and various other prevention materials and brochures that were related to the effects of weather on fire behavior.

An interagency wildfire prevention team member training was conducted in Tallahassee in June 2007 with 23 additional Division of Forestry personnel now certified as national fire prevention team members.

The Forestry Arson Alert Association sponsored refreshments for several Firewise workshops and Cooperator meetings this past year.

The "Living With Fire in the Wildland Urban Interface" newspaper insert was reprinted and inserted into 17 newspapers throughout the state. A circulation of 320,000 inserts targeted areas within the

wildland/urban interface.

Cooperative Fire Protection Manager Ronda Sutphen and the Marion County Multi-agency Wildland Task Force received the prestigious Bronze Smokey Bear award, and Mitigation Specialist Gerry LaCavera received the National Fire Protection Association award for fire prevention at the Florida Fire Chiefs Association Conference in Fort Myers in July. Sutphen received her award for her innovative statewide wildfire prevention campaigns after the 2004 and 2005 hurricane seasons. The Marion County Multi-agency Task Force, made up of personnel from the U.S. Forest Service, Division of Forestry, Department of Environmental Protection, Marion County Emergency Management, Marion County Fire-Rescue, Ocala Fire-Rescue and Dunnellon Fire-Rescue, received the award for their interagency cooperation in working together to provide coordinated wildfire public education and fire suppression efforts during wildfire season. Only 10 Bronze Smokey Bear awards are given out nationally each year. This year only six were given out and two of the six were from Florida. Gerry LaCavera was recognized nationally for his fire prevention and mitigation efforts in the Caloosahatchee District. He has been very instrumental in getting local government officials, planners, and developers involved in creating community wildfire protection plans in Collier and Lee counties.

This year, the Division of Forestry continued its effective Prescribed Fire Educational Campaign. The campaign consisted of two radio public service announcements. During the one-year run, the radio PSAs aired just over 9,000 times across Florida.

Conserving the Natural Environment

Natural Resource Management

The Department manages natural resources by acquiring land, providing technical assistance to private landowners, and operating programs on state forests and other state lands. The Division of Forestry employs multiple-use principles to ensure a sustained healthy forest for 1,016,029 acres on 33 state forests. The most current scientific knowledge is used to ensure good stewardship and the practice of silviculture based on sound ecological principles. The Department supports other state agencies as a cooperating manager on 275,000 acres and assists management on an additional 475,000 acres of public forests through special agreements with such public entities as the Department of Environmental Protection, the Florida Fish and Wildlife Conservation Commission, Water Management Districts, Department of Corrections, and various counties.

Land acquisition closings through the Division of Forestry Additions and Inholdings Program of Florida Forever totaled 436 acres at a value of \$1,132,900. A total of 14,361 acres was added to the state forest system during the year under Florida's Conservation Land Acquisition Programs. All of these lands are managed to provide as many compatible uses and benefits to the public as possible while still providing protection for threatened or endangered species of plants and animals. During the fiscal year state forest managers completed 14,755 acres of non-native, invasive plant treatment on 30 state forests, using a combination of in-house staff and contractual services. Public recreational opportunities on these lands include fishing, hunting, hiking, picnicking, canoeing, camping, swimming, bird watching, bicycling, and horseback riding. Approximately 909,122 visitors participated in these activities during the year. The management of state forests generated revenues of approximately \$6.75



million during the year, with an estimated \$4.7 million coming from the sale of timber and the remainder coming from other state forest income, including recreation fees charged by the Department. The Department pays 15 percent of the revenue from state forest operations to the counties in which these forests are located. The revenue returned to counties for fiscal year 2005-2006 was \$881,084. It is anticipated that approximately \$1,013,099 will be returned to counties for fiscal year 2006-2007. There are substantial direct and indirect benefits provided to local governments from the management of these lands.

Technical Assistance

The Department provides technical assistance to help private landowners and communities make intelligent decisions to develop and achieve their objectives in forest land management. The Forest Stewardship Program, part of a national initiative that encourages private forest landowners to man-

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age properties for multiple uses, provided 154 Forest Stewardship Plans to be completed on 43,262 acres. Through this program, 45 landowners were certified as completing multiple-use management activities. The Forest Land Enhancement Program awarded a total of \$362,460 in cost-share funding to 138 non-industrial private forest landowners to help them implement forest management activities on a total of 12,060 acres. During the fiscal year, the Southern Pine Beetle Prevention Cost-Share Program approved a total of \$576,980 for 171 landowners to conduct thinning and prescribed burning treatments on 20,041 acres of pine forests. This year, the Department is closing out three hurricane recovery assistance programs provided through the USDA Forest Service for recovery from the 2004 hurricane season. Two of those include the Forest Stewardship Hurricane Recovery program that provided over 6,696 private forest landowners with professional forestry recommendations for forest land restoration. The Forest Land Recovery Program provided \$6 million in cost-share assistance to over 600 private forest landowners to restore 44,086 acres of forest land. The Department's Andrews Nursery produced and sold 10.2 million bare root pine seedlings and 3.9 containerized pine and wiregrass seedlings to 589 customers. This produced more than \$1,143,000 in revenue. The Department awarded \$316,000 in federal urban and community forestry grants to a total of 26 non-profit organizations, local governments, and educational institutions to enhance their ability to carry out effective urban forest management programs in their respective communities. This year, the Department continues to administer hurricane recovery grant funds, provided through the USDA Forest Service for recovery from the 2004 hurricane season. The funds have been distributed to 214 local governments, educational institutions, and non-profit organizations to help Floridians recover from the

2004 storms and to help mitigate damage incurred by future storms.

Field Operations

The division's forestry programs are implemented by Field Operations staff located in the state's 15 field units and the Tallahassee state office. The field units are grouped into four regions, each under a Deputy Chief of Field Operations. The multifunctional workforce of personnel and equipment provides a responsive and comprehensive approach to land management and wildfire control statewide.

Forest Resource Planning and Support Services

The Bureau of Forest Resource Planning and Support Services provides technical support to all bureaus within the Division of Forestry. Sections include professional staff to address issues in hydrology, information technology, construction, fleet management/equipment, and planning.

Hydrology

The Division of Forestry is responsible for development, implementation, and monitoring of Silviculture Best Management Practices (BMPs) that protect the state's water resources, and for implementing hydrologic and wetland restoration on state forests.

Silviculture BMP training accounted for over 20 workshops conducted statewide to continually update landowners, loggers, and foresters on recent changes. Over 600 individuals participated in these training sessions.

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In addition, the Division of Forestry continued to solicit participation by forest landowners in Florida's Administrative Rule 5I-6, which provides additional incentives to comply with forestry BMPs. These incentives include property rights protection under Florida's Right to Farm Act and a presumption of compliance with state water quality standards where BMPs are followed. Rule 5I-6 became effective on February 11, 2004. Over 9,000 individual tracts totaling over 5.2 million acres were enrolled in the program through the end of the fiscal year 2006-2007.



The Division of Forestry continued wetland restoration efforts on Florida's State Forests in fiscal year 2006-2007 with the cooperation and assistance of other state and federal agencies. During the past 12 months, four restoration projects were completed on three state forests. These projects enhanced or restored a total of 1,700 acres of previously altered wetlands, including approximately 800 acres on the Picayune State Forest as a result of work done under the comprehensive Everglades Restoration Project.

Total estimated cost of fiscal year 2006-2007 restoration efforts on state forests is \$45,000. The Division of Forestry's share of these costs amounted to approximately \$10,000, or 22.2 percent. The balance was funded through Water Management District restoration project funding, Florida Department of Transportation, and mitigation programs coordinated through the Water Management Districts.

Since fiscal year 2002-2003, over 23,120 wetland acres on 11 state forests have been restored in 27 restoration projects. Total expenditure for all projects to date is approximately \$1,128,000, of which the division's share is \$159,600, or roughly 14.1 percent.

Historically, approximately 45 percent of all wetland restoration projects on Florida's state forests are funded through compensatory mitigation; another 34 percent, through project funding via other state agencies; 11 percent, through federal grants; and the remaining 10 percent, through the division's operating expense budget.

Currently, the division has four active restoration projects on three state forests and four additional projects in the planning stage on three other forests. All projects are monitored for five years after completion for effectiveness and hydrological and ecological impacts.

Information Technology

The Forestry Information Technology (IT) Section supports microcomputers, applications, geographic information systems (GIS), and global positioning systems (GPS) for the Division of Forestry. Related functions include: hardware/software acquisition, installation/maintenance, Intranet/Internet web management, application development/maintenance,

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and spatial analyses. These activities support land management and wildland fire protection service areas.

During fiscal year 2006-2007, the section focused on migrating three legacy mainframe applications to new platforms: refactoring the Fire Management Information System (FMIS) application, installing new application servers, and deploying replacement laptops and desktops; installing high-speed Internet connections for several field offices; and developing an IT handbook and a revision of the division's computer policy.

The Application Section implemented the migration of three legacy mainframe applications to new platforms. The Seedling (SED) application was migrated to .Net/Oracle application, TREES. Forestry Equipment Inventory (FEI) application was migrated to the State of Florida EMIS application. The Application Section provided IT project management for a consultant to refactor the FMIS application, which improved software design and performance and reduced application errors and maintenance costs. New application servers were purchased, configured and installed.

Division web support, for both Intranet and Internet pages, was concentrated mostly around maintenance and updates. The total number of viewings for the division's web site was 2,022,590, excluding visits from Department computers. The division posted a daily report on the current wildfire situation with maps detailing wildfire locations, KBDI***, burn ban status, links to fire weather, road closings, wildfire prevention, and smoke information. During the peak of the wildfire campaign, web pages were updated twice a day to keep current. Normally, visits to the Division of Forestry home page averages 550 per day. In May 2007, the daily average was

4,065, and on May 11 there were 15,300 visits. The wildfire "daily report" page had 115,665 viewers.

Work in the GIS Section focused on GIS training for division users and on updating GIS data. GIS training was provided to state forest offices and County Foresters on ArcGIS software and the Forestry Data Model. Updates to the GIS and GPS Support Intranet web site provided downloadable GIS data, maps, tools, metadata information, policies, and procedures. Several maps depicting wildfire progression, fire perimeters, point locations, fires over 300 acres, burn bans, and wildfire complexes were produced. The GIS Section's manager held the position of Chair on the National Wildfire Coordinating Group's Geospatial Task Group for 2006-2007 and serves as a member of the Southern Group of State Foresters GIS Task Force.

The Desktop Support Section was involved with the deployment and installation of 202 desktops and 132 laptops. Seventeen field offices were upgraded from dial-up Internet to high-speed Internet service. Specialized equipment maintenance analyzers and repair software were installed at district shops.

Construction

The Construction Section provides complete project management for the division's fixed capital outlay projects, including design and construction. Additionally, the Construction Section coordinates and manages disposal of surplus properties, takes care of asbestos management in division buildings, and provides assistance to the field units on a variety of small construction projects. These small construction projects typically include construction of equipment sheds, renovations and additions to existing facilities, recreation facilities such as pavilions, boardwalks and restrooms, and conver-

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sion of old residences to office space. During fiscal year 2006-2007, an estimated 35,000 square feet of building space was constructed, or under construction, at a cost of approximately \$4.8 million. The Construction Section coordinates design, engineering, bid specifications, and construction management for each project. A current major project is the construction of the new Waccasassa Forestry Center Headquarters complex in Gainesville for \$2.7 million. The new facility improves the division's capabilities for firefighting, forest management, and access to the general public.

Equipment

The Bureau of Forest Resource Planning and Support Services' Equipment Section has statewide responsibility for fleet management for the Division of Forestry. The current replacement value of the fleet is approximately \$110 million. Fleet replacement needs are approximately \$40 million. The Equipment Section purchases the specialized firefighting and forestry land management equipment and motor vehicles. During fiscal year 2006-2007, the division received approximately \$8.8 million in budget allocations and grants to purchase forestry equipment. This section also coordinates fleet management for the division, which includes motor vehicle and equipment specification development for bids and acquisition, equipment inventory, and warranty issues. In addition, special projects for the division are conducted to ensure compliance for forestry equipment performance. These motor vehicles will receive custom fabrication to meet firefighting and land management specific requirements at the division's Lake City Central Shop.

Planning

During fiscal year 2006-2007, the Bureau of Forest Resource Planning and Support Services' Planning Section compiled data for reporting division accomplishments related to legislatively approved performance measures, coordinated development of forestry district and bureau annual operational plans, submitted long-range program plans as part of a legislative budget request, completed and published the "Florida's Forest Resources: Action Plan for 2006-2010," and conducted reviews of county comprehensive planning documents, utility siting applications, and clearinghouse projects on an ongoing basis.

The bureau administers the Florida Forestry Discovery Center, which is part of the Florida State Fair and receives over 26,000 visitors annually. The bureau also issues quarterly fiscal reports of operating capital outlay motor vehicle and fixed capital outlay status for the division.

Safety

The mission of the Division of Forestry is to manage forest resources and protect Florida and its citizens from wildfire. The duties and tasks involved in accomplishing this mission are both numerous and hazardous, which is why the safety of employees is a high priority.

The division's safety record over the past year is evidence that safety is recognized and promoted in all aspects of division activity. In spite of a very active fire season in 2007, injuries were down 16 percent from last year. This year, 220 injuries and/or illnesses were reported, compared with 264 for the previous year.

Conserving the Natural Environment

The safety program has undergone many changes this year, including staffing changes, but the goal remains to keep moving forward toward positive change. Implementing new ways to track trends and providing more efficient methods of safety training to employees are just a couple of examples of the division's efforts to create the safest work environment possible.

Forestry Youth Academy

The Division of Forestry's Youth Academy in the Goethe State Forest in Levy County provides a life-changing experience for juvenile offenders that will transform them into productive citizens.

The Forestry Youth Academy is a low-risk residential program for youthful offenders aged 15 to 19. It was established in 1996, through a joint agreement between the Division of Forestry, the Florida Department of Juvenile Justice, and the Levy County School Board. Residents receive academic and vocational training and learn important social and life skills. They are taught discipline and teamwork and have the opportunity to develop positive values and a sense of personal responsibility. Hands-on training is available in such areas as building and maintenance, heavy equipment operation, small gas engine repair, welding, culinary arts, chainsaw operation, and firefighting.

When students graduate from the Forestry Youth Academy, they leave with a high school diploma or enough credits to place them back in their appropriate grade level. They also earn two vocational certifications. This year, 33 students left the program as "Successful Completers," earning credits towards a high school diploma and receiving at least two vocational certifications.

Training

Fiscal year 2006-2007 marked the ninth year of operation for the Florida Center for Wildlife and Forest Resources Management Training in Brooksville. The center provides classes in Basic Fire Control Training to the division's new firefighters. The seven-week training program is offered twice per year. This year, 59 new candidates received certification as Wildland Firefighters in Florida.

The center also provided 76 open-enrollment training courses during the fiscal year. These included courses in wildland firefighting, incident management, computer training, instructional development, vehicle repair and maintenance, domestic preparedness, leadership, health and safety, and natural resource management. These courses were attended by 1,110 Division of Forestry employees and 574 non-division (cooperator) students. The training center assisted the division's districts to offer 66 incident management courses during the same time period.

The Training Center also provided environmental education to teachers and students through the division's Forestry Teachers' Tour, Future Farmers of America, and the Envirothon program.



Safeguarding Florida's Consumers



Division of Consumer Services

During fiscal year 2006-2007, the Division of Consumer Services continued its legacy of serving as Florida's complaint and information clearinghouse. Division staff efficiently provided consumer information, processed written complaints, and promoted consumer protection. During this period, the division's Consumer Assistance Call Center handled more than 270,000 telephone calls and 9,467 email requests to assist consumers and businesses. Additionally, the division received 27,088 written complaints, recovered \$6,167,049 in consumer refunds and property, and provided 233,520 brochures, pamphlets, and booklets for distribution to consumers.

In an effort to increase public awareness, the division's consumer outreach program provided speakers to civic groups and organizations throughout the state. The speakers provided general consumer information and the latest news on scams, fraud, and deception. They also provided educational materials on a variety of topics. In addition, the division utilized its web site www.800helpfla.com to educate consumers and businesses. The web site served as a valuable source for information on the many services provided by the Department and other government and non-government offices. Businesses have access to licensing and registration information, as well as the forms necessary to comply with applicable regulations. Online services were enhanced, making it more convenient to do business with the Department. Some businesses can now renew their registrations online, and

Safeguarding Florida's Consumers

consumers can file a complaint to have their dispute resolved. During fiscal year 2006-2007, the web site received a total of 1,644,921 visits.

The division continued imaging and scanning all registration and complaint files. This process has contributed to the division's efficiency and productivity by streamlining business processes. Division staff can access documents instantly, the need to archive records has been eliminated, and public records requests can be processed promptly. By imaging and scanning documents, the management and control of files are more uniform.

The Department also functions as the U.S. Consumer Product Safety Commission's liaison in Florida regarding product recalls, inspections, and investigations.

Consumer Assistance Call Center

The Consumer Assistance Call Center maintains and operates the Department's toll-free consumer hotline 1-800-HELPFLA (1-800-435-7352), and the Spanish hotline 1-800-FL-AYUDA (1-800-352-9832). The Call Center is staffed with trained personnel who respond to a wide variety of consumer questions about Florida laws and other consumer-related issues. They assist callers in locating the appropriate governmental office they are seeking and then transfer the caller to that office. They provide up-to-date information and educational brochures.

Consumer questions cover various areas the Department regulates, such as business opportunities, dance studios, game promotions, health studios, intrastate moving, motor vehicle repair, Florida's Do Not Call program, pawn shops, sellers of travel, solicitation of charitable contributions, telemarket-

ing and the motor vehicle Lemon Law. The Consumer Assistance Call Center staff also responds to inquiries on a multitude of subjects that are not regulated, such as landlord/tenant issues, buying clubs, and retail store regulations. Staff utilizes the Department's computer database to develop statistical information on the frequency and type of calls received. Each call is logged under a specific subject category in the database, which allows the Department to track and analyze the most prevalent consumer issues. This record enables consumer education efforts to be tailored to the specific needs of the public.

During fiscal year 2006-2007, staff provided 469,522 assists to consumers and businesses by providing information, brochures, and complaint and registration forms. Eighty-four percent of callers responding to surveys ranked the Consumer Assistance Call Center's service as outstanding.

As a result of the wildfires that affected Florida in 2006, the Consumer Assistance Call Center converted to a price-gouging hotline. The Call Center staff responded to over 2,500 consumers seeking information and assistance due to the disasters.

Consumer Complaints

Complaints are received online and via mail, and deal with a variety of subjects. The Bureau of Mediation and Enforcement processes all consumer complaints filed with the Division of Consumer Services. Division staff reviews each complaint for violations of applicable laws. If the complaint falls within the jurisdiction of the Department or if it is a non-regulated complaint, staff will attempt to resolve disputes through informal mediation. Complaints that fall under the jurisdiction of another federal, state, or local governmental agency are referred to

Safeguarding Florida's Consumers

that office for processing. The top five complaint categories during fiscal year 2006-2007 were: telephone sales solicitations (Do Not Call), travel and vacation plans, motor vehicle repair, communications, and construction. During fiscal year 2006-2007, the division received 12,109 complaints filed against entities regulated by the division and recovered \$3,278,079 in monetary refunds and property for consumers. In addition, another 14,979 complaints filed against non-regulated businesses were received, which resulted in \$2,888,970 in monetary refunds and property to consumers. The division also assisted in recovering an additional \$126,110 in consumer refunds from security instruments (bonds, letters of credit, or certificate of deposits) filed with the Department for the protection of consumers from a breach of contract.

Motor Vehicle Lemon Law

The Department administers the Florida Motor Vehicle Warranty Enforcement Act, commonly known as the "Lemon Law." Personnel respond to consumer complaints and inquiries, provide information about the Lemon Law, and determine whether claims are potentially eligible for state arbitration before the Florida New Motor Vehicle Arbitration Board.

The Department also provides certification to motor vehicle manufacturers who establish informal dispute settlement procedures in compliance with applicable federal and state statutes. In fiscal year 2006-2007, the Department recertified informal dispute settlement procedures for General Motors, Honda/Acura, Nissan/Infinity, Bentley, Saab, Volkswagen/Audi, AM General, Isuzu, Hyundai, Kia Motors, Saturn, and Ford Motor Company. These manufacturers utilize the Better Business Bureau Auto Line to administer their programs. Porsche, Toyota, and Lexus were also recertified. These

manufacturers utilize the National Center for Dispute Settlement to administer their programs. Each of these programs is audited throughout the year for compliance.

During fiscal year 2006-2007, the division answered 16,975 telephone calls on the Lemon Law hotline, 1-800-321-5366. The division also processed 982 requests for state arbitration and approved 720 of these for referral to the Attorney General's office. In addition, division staff reviewed 3,268 consumer cases that were processed through the manufacturers' informal dispute settlement programs.

Regulated Programs

The Department is responsible for regulating a variety of industries operating in Florida, including business opportunities, dance studios, game promotions/sweepstakes, health studios, intrastate moving, motor vehicle repair shops, Florida's Do Not Call program, pawn shops, sellers of travel, solicitation of contributions, and telemarketing. These programs are designed to protect consumers and the integrity of each industry. Industry members must submit a registration/license application or similar filing and, in some cases, a surety bond, certificate of deposit, or letter of credit to ensure consumer refunds in the event a business defaults.

Business Opportunities

The Business Opportunities Program requires individuals who sell or lease any products, supplies, or services for the purpose of starting a business to register and disclose certain information to prospective purchasers. Some sellers must also submit a \$50,000 surety bond, certificate of deposit, or letter of credit. In fiscal year 2006-2007, there were 2,408 sellers of business opportunities and franchises

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registered with the Department. Staff processed 372 written complaints, investigations, and enforcements. Consumers received \$222,378 in refunds, and staff collected \$29,500 in administrative fines.

Dance Studios

The Dance Studio Program requires all ballroom dance studios to register with the Department. In some instances, registrants are required to post a surety bond, certificate of deposit, or letter of credit. For fiscal year 2006-2007, there were 200 dance studios registered with the Department. Staff processed 35 written complaints, investigations, and enforcements, recovered \$12,009 in consumer refunds, and collected \$6,284 in administrative fines.

Game Promotions

The Game Promotions Program requires operators who conduct contests, games of chance, or gift enterprises in connection with the sale of consumer products or services in which the total announced value of prizes offered is greater than \$5,000 to file with the Department. Unless they have been granted a waiver, operators are also required to establish a trust account or obtain a bond in an amount equivalent to the total value of all prizes offered. During this fiscal year, the Department started using e-commerce to allow game promoters to conduct online transactions when filing promotions. Game promoters filed 799 promotions using the Department's e-commerce system. During fiscal year 2006-2007, staff processed 5,689 game promotion filings, and processed 767 written complaints, investigations, and enforcements. Additionally, staff recovered \$3,164 in consumer refunds and collected \$379,500 in administrative fines.

Health Studios

The Department regulates health clubs that offer health club activities or physical exercise equipment. Some health studios are required to post a \$50,000 surety bond, certificate of deposit, or letter of credit to satisfy consumer claims that may result from violations of Florida law. During fiscal year 2006-2007, there were 2,139 health studios registered with the Department, staff processed 1,019 written complaints, investigations, and enforcements, recovered \$54,256 for consumers, and collected \$36,775 in administrative fines.

Intrastate Moving

The Department regulates intrastate moving companies operating in Florida. This law requires a written estimate be given to consumers before the mover provides any moving or packing services. During fiscal year 2006-2007, there were 1,081 intrastate moving companies registered with the Department. Staff processed 937 written complaints, investigations, and enforcements, recovered \$143,962 in consumer refunds, and collected \$53,574 in administrative fines.

Motor Vehicle Repair Shops

The Department regulates all motor vehicle repair shops in Florida in accordance with the Motor Vehicle Repair Act. This law requires an estimate and invoice form be provided to consumers for repair work exceeding \$100. During this period, the Department continued using e-commerce to allow motor vehicle repair shops to conduct online transactions when renewing their registration. This fiscal year, 1,130 motor vehicle repair shops renewed their registration using the online renewal process. During fiscal year 2006-2007, there were 24,682 motor

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vehicle repair shops registered with the Department. Department staff processed 4,194 written complaints, investigations, and enforcements, recovered \$899,847 for consumers, and collected \$153,975 in administrative fines.

Do Not Call

The Florida Do Not Call law is a privacy law enacted to protect consumers from unwanted telephone solicitations and pre-recorded messages. Consumers can subscribe to the Do Not Call List for an initial fee of \$10, with a \$5 annual renewal fee. Subscribers may file a complaint with the Department for any unwanted phone calls they have received from non-exempt businesses. Consumers may also file a complaint if they receive pre-recorded messages. At the end of fiscal year 2006-2007, the Department had processed 12,400 new subscriptions and 90,325 renewals for a total of 102,725 subscriptions. The program processed 4,947 written complaints and enforcements. A total of \$104,172 was collected in civil penalties.

Pawn Shops

The Department licenses all pawn shops operating in Florida pursuant to the Florida Pawnbroking Act. Each pawn shop must maintain a net worth of at least \$50,000 or file a \$10,000 security in the form of a surety bond, certificate of deposit, or letter of credit. During fiscal year 2006-2007, there were 1,173 pawn shops licensed with the Department. Staff recovered \$12,307 in consumer refunds and collected \$2,500 in administrative fines.

Sellers of Travel

The Department regulates travel agencies in Florida for compliance with the Sellers of Travel Act. Non-exempt sellers of travel must register and, in some cases, submit a performance bond, certificate of deposit, or letter of credit in an amount not to exceed \$25,000, or \$50,000 if they sell vacation certificates. A seller of travel that has been in business for at least five years and meets certain other requirements may apply for a security waiver. In addition, independent agents must submit annual filing statements to the Department. During fiscal year 2006-2007, 10,787 sellers of travel and independent agents were registered with the Department. Staff processed 3,175 written complaints, investigations, and enforcements, recovered \$1,573,416 in consumer refunds, and collected \$39,167 in administrative fines.

Solicitation of Contributions

The Solicitation of Contributions Act requires charitable organizations, sponsors, professional fundraising consultants, and professional solicitors to register with the Department. During fiscal year 2006-2007, there were 13,503 charitable organizations, sponsors, professional solicitors, and fundraising consultants registered with the Department. The Department processed 1,164 written complaints, investigations, and enforcements, recovered \$70,599 in consumer refunds, and collected \$83,455 in administrative fines.

Telemarketing

The Florida Telemarketing Act requires non-exempt telemarketers to obtain a license from the Department and submit a \$50,000 surety bond, certificate of deposit, or letter of credit. During fiscal year

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2006-2007, there were 3,426 businesses and individuals licensed with the Department. Staff processed 976 written complaints, investigations, and enforcements, recovered \$286,141 for consumers, and collected \$4,000 in administrative fines.

Investigations

The Investigations Section conducts investigations of businesses (both regulated and non-regulated) and responds to consumer complaints. The priority for this group is to ensure businesses operate in compliance with applicable laws. This group also investigates businesses suspected of fraud and deceptive trade practices. During fiscal year 2006-2007, the Investigations Section worked 5,205 enforcements and initiated 478 investigations covering a variety of topics. The high-volume cases for investigations were motor vehicle repair, intrastate moving, and solicitation of contributions.

Consumer Education

The Division of Consumer Services continued to promote its educational outreach programs aimed at increasing public awareness of consumer protection issues among Florida citizens. During fiscal year 2006-2007, the division provided 2,324,572 assists to consumers and businesses statewide through a variety of formats, including the web site, newspaper articles, newsletters, brochures, and public presentations.

Division representatives gave public presentations on consumer-related topics to more than 3,000 consumers representing various groups and organizations throughout the state. The division's web site was updated regularly to include relevant information to businesses and consumers on various laws, as well as current frauds and scams.

At the end of fiscal year 2006-2007, the subscription list for the monthly e-newsletter for Florida consumers contained 25,110 subscribers. The newsletter provides quick tips on important consumer-related issues and lists resources for finding additional information.

Additionally, the division had articles on consumer-related issues published in three issues of the Elder Update, a newsletter published by the Florida Department of Elder Affairs. More than 70,000 copies per issue were distributed to senior citizens on a bi-monthly basis. Consumer education is the main focus of the division. The division's educational efforts focus on making individuals better consumers and empowering them to make informed decisions when purchasing products and services and signing contracts.

The Department sponsored the Florida LifeSmarts program for the 11th year. LifeSmarts is an innovative competition that tests students in grades 9-12 on their knowledge of personal finance, health and safety, the environment, technology, and consumer rights and responsibilities. The Florida online competition involved more than 1,400 students from public and private high schools, FFA and 4-H clubs, and home-school settings throughout the state. Students competed online to be among Florida's finalists to compete for the state title. The 2007 national LifeSmarts competition sponsored by the National Consumers League was held in Orlando. State champion teams from across the nation traveled to the national competition to compete to become the national LifeSmarts champions.

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Division of Standards

Petroleum Inspection

The Department regularly conducts inspections of the petroleum distribution system and tests samples of alternative and petroleum fuels to ensure compliance with state quality standards. Inspections and testing ensure consumers are being offered quality products at fair measure.

The Department's three petroleum testing laboratories routinely test the quality of gasoline, kerosene, alternative fuels, diesel, and fuel oil through octane rating, distillation, vapor pressure, sulfur content, oxygenate content, lubricity, flash point, and other related analytical tests.

In fiscal year 2006-2007, the samples collected and tested represented more than 10.5 billion gallons of

alternative and petroleum fuels distributed throughout Florida. More than 99 percent of the samples met state standards, which are considered among the strictest in the nation. During this period, the Department issued 352 stop-sale orders to prevent the sale of more than 961,242 gallons of substandard fuel.

The Department laboratories, located in Tampa, Tallahassee, and Port Everglades, conducted 113,220 tests of petroleum and alternative fuels and antifreeze and brake fluid products during this period. Department petroleum field inspectors also conducted 184,333 inspections on retail motor fuel dispensers at approximately 9,173 retail motor fuel facilities throughout Florida. Petroleum field inspections included calibrating tests, proper installation and maintenance of measuring devices, price gouging investigations, testing for water and debris, verification of alternate generated electricity wiring

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and equipment, and correct labeling of motor fuel dispensers. As a result of these inspections, 3,187 motor fuel pumps were taken out of service due to improper calibration and 30,318 correction notices were issued for improperly maintained pumps.

The Department is also responsible for registering and monitoring antifreeze and brake fluid products sold in Florida. Laboratory personnel analyze antifreeze for corrosion, freezing point, boiling point, and chemical content as part of the antifreeze registration and regulatory program. Similarly, brake fluid also must pass strict standards for boiling point, elastomer swelling, and chemical content before being registered by the Department for sale to the public. During fiscal year 2006-2007, the Department registered 635 brands of antifreeze and brake fluid as acceptable products to be marketed throughout Florida.

The Department handled 4,446 petroleum-related consumer complaints as a result of posting the 1-800-HELPFLA consumer hotline decal on motor fuel dispensers, and staff investigated 78 price-gouging complaints as a result of declared states of emergency. Complaints were concentrated primarily on fuel quality, meter accuracy, and price. The petroleum inspection field staff targets responding to these complaints within 24 to 48 hours.

This past year, the Department inspected 1,256 wholesale and retail motor fuel facilities that were required to have alternate generated electricity equipment and/or wiring installed to operate designated facility functions during an electrical outage. Affected facilities were required to install electrical transfer switches to connect to electricity generators, which may be used to supply electrical power to facilities and supply available fuel to consumers during a disaster.

The Department also witnessed renewable and alternative fuels migrate further into Florida's motor fuel marketplace. Following last year's preparation for such products, the Department's petroleum testing laboratories were able to test such fuels entering the marketplace, ensuring compliance with state fuel quality standards and providing maximum consumer protection for those using these new products.

The Department uses numerous fraud investigation techniques, including the deployment of undercover vehicles, to ensure that consumers receive fair measure from petroleum pumps. The unmarked vehicles have a specially designed and calibrated gasoline tank that enables a trained inspector to determine a pump's calibration without a service station operator's knowledge. The undercover vehicles confirm that petroleum pumps in Florida are accurate and consumers are receiving fair measure.

Weights and Measures

The Department conducted over 62,000 inspections and accuracy tests on commercial weighing and measuring devices. Staff ordered 5,059 devices to be corrected because they were found to be out of compliance with adopted standards. Another 2,035 devices were taken immediately out of service because they were found to have excessive measuring errors. Commercial weighing and measuring devices include retail scales, prescription balances, livestock scales, truck scales, and taximeters.

Department inspectors check the accuracy of net contents and labels of packaged goods including food products, dry goods, household items, building and construction materials, gardening products, and hundreds of other products purchased daily by consumers and businesses in the state. In fiscal

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year 2006-2007, inspectors sampled lots representing more than 341,000 packages. Stop-sale orders were placed on over 48,000 packages that contained less than the stated contents or failed to provide the required information on the label. Many more packages were recalled or relabeled by producers as a result of Department inspections. A risk assessment procedure was developed and implemented in 2006 that enables inspectors to more efficiently evaluate packages for compliance and target packages more likely to be in violation.

Inspectors randomly tested 12,941 items for price accuracy in 217 businesses, primarily grocery, department, discount, drug, building supply, and other retail stores. Overall results showed that 1.54 percent scanned at more than the posted price and 1.71 percent scanned at less than the price advertised. Violations were corrected immediately, and 33 businesses that failed to meet the 98 percent national accuracy standard faced additional sanctions and testing.

In the state metrology laboratory, the state primary standards of mass, length, and volume were used in comparing and calibrating more than 8,552 mass standards used by state inspectors, laboratories, high-tech industries, and commercial scale repair agencies, as well as 739 test measures used to check the accuracy of gas pumps and wholesale meters. The laboratory was audited by the National Voluntary Laboratory Accreditation Program in 2007 and again achieved accreditation for providing traceable calibration services. The lab was one of the first state metrology laboratories to achieve this accreditation. In addition to providing Florida citizens, industries, and government agencies with calibration services, the lab performs special tests such as standardizing grain samples for use in testing moisture-determining equipment at commercial grain elevators.

Fair Rides Inspection

The Department has an amusement ride inspection program which, by reputation, is the most comprehensive of any state in the country.

All amusement rides, except those at theme parks, which are exempt by law, are inspected and permitted each year by the Bureau of Fair Rides Inspection. Permanent amusement rides – those located at a fixed site – are inspected twice each year. Temporary amusement rides, such as those used by carnivals, are inspected each time they are moved or set up. Currently, there are 190 permanent locations and 177 temporary or traveling amusement ride companies operating in Florida.

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To handle this workload, the Department has 15 inspection specialists stationed statewide to inspect and permit amusement rides. Department inspectors are constantly trained with recurring on-the-job training and structured training seminars developed by the Department. These ongoing training opportunities ensure inspectors stay abreast of the latest information on over 1,000 different rides currently permitted for operation. In addition, continuing education seminars sponsored by the amusement industry, amusement ride manufacturers, safety organizations, and engineers or other subject matter experts keep inspectors current on the latest inspection techniques.

In fiscal year 2006-2007, the Department issued permits for 1,562 amusement rides and conducted 10,054 inspections statewide. Those inspections

identified 17,619 deficiencies on those amusement rides, all of which were corrected before the rides were allowed to open for public use. The Department issued 280 stop-operation orders for unsafe, uninsured, or un-inspected amusement rides and 66 administrative complaints resulting in fines for violations and non-compliance. The Department also investigates accidents and mechanical failures involving amusement rides and, when appropriate, closes and impounds unsafe amusement rides. During fiscal year 2006-2007, there were over 150 reportable accidents that were fully investigated, analyzed, and used to develop preventive measures. Recently, the bureau revised and updated its data base to compile accidents, violations, mechanical defects, and consumer complaints in order to provide a comprehensive amusement ride company profile for use by the public.

The Florida Amusement Device and Attraction Advisory Committee was created in 1991 by the Commissioner of Agriculture to advise and consult with the Department on amusement ride issues. The Committee, which is appointed by the Commissioner, includes a cross-section of members from the amusement industry, fair industry, amusement parks, and technical or subject matter experts. This committee holds at least two public meetings annually to discuss safety issues, ride inspections, ride equipment, industry concerns, and other matters in support of the Department's inspection program.

Each year, the Department participates in a consultation program with the large theme parks in Florida on safety issues. Department staff visits each of the parks and reviews safety, maintenance, and operation procedures of the park rides. Furthermore, the theme parks file an affidavit of annual inspection on all their rides. The Department is a member of the American Society of Testing and Materials,

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Committee F-24, which develops standards for the manufacture, fabrication, performance, and testing of amusement rides and devices. The Department is also a member of the Council for Amusement and Recreational Equipment Safety (CARES), which is a national association of government regulatory officials that shares information among members and works with the U.S. Consumer Products Safety Commission on amusement ride issues.

Liquefied Petroleum Gas Inspection

The Bureau of Liquefied Petroleum (LP) Gas Inspection is charged with the regulation of LP gas usage, storage, distribution, handling, and transportation from the time the product enters the state until it reaches its final point of consumption. There are over 3,500 storage and distribution facilities in the state which handle approximately 400 million gallons of propane annually. At any given time, there is approximately 20 million gallons of storage contained in these facilities. During fiscal year 2006-2007, the bureau conducted 9,674 facility inspections, investigated 43 LP-gas related accidents, and issued 11,385 licenses and qualification examination certifications. The bureau took 3,934 enforcement actions to ensure compliance with safety regulations, including 1,354 notices of non-compliance and 2,099 cease-and-desist notices.

The bureau administered 1,089 examinations during fiscal year 2006-2007. In addition, it conducted over 52 classes for safety training of dispensing unit operator personnel, building officials, and pipeline distribution system operators. In May 2007, the bureau co-sponsored the annual Ocala Safety School, which had 120 participants. Each year, this weeklong school draws attendees from all over the world.

In addition to the regulatory duties prescribed in Chapter 527, F.S., the bureau is charged with administrative oversight for the Florida Propane Gas Safety, Education and Research Act. Under this act, a regulatory monetary assessment is collected annually from the propane gas industry to fund programs for training, education, consumer safety, marketing, research, and development programs relating to the propane industry in Florida. In conjunction with this program, the Department maintains a consumer information web site and publishes and distributes thousands of consumer safety brochures relating to home heating safety, safe grilling, general safety practices, and the reporting of gas system changes to gas suppliers.

Other activities of note during the 2006-2007 fiscal year include the following:

- Continued to improve upon and promote the e-commerce web site for online licensing, training, and examination registrations.
- Worked with local building and permitting officials to enforce statutory guidelines and ensure code compliance in the growing home and commercial generator market.
- Participated in the Plumbing and Gas Technical Advisory Committee of the Florida Building Code Commission.
- Participated in the Florida Propane Gas Association's Codes and Standards Committee, to address safety code issues in Florida.
- Worked with several southern states to address multi-jurisdictional issues such as composite cylinder issues and the sale of illegally modified tanks and illegal container valves.

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- Conducted a joint investigation of composite cylinder failures with the U.S. Department of Transportation.
- Participated in the Liquefied Petroleum Gases Technical Advisory Committee of the National Fire Protection Association to promulgate LPG safety standards.
- Participated in the National Association of Pipeline Safety Representatives meetings.
- Conducted inspections of approximately 300 cylinder installations at the Florida State Fair.
- Issued various safety bulletins and press releases related to industry and consumer safety.
- Participated in the annual Florida Plumbing, Gas and Mechanical Inspectors meeting.

Division of Licensing

Private Investigative, Recovery, and Security Industries, and Concealed Weapon or Firearm Licenses

The Division of Licensing administers two distinct licensing programs.

The first program is regulatory in nature and involves the oversight of a specific group of professions and the individuals that work in those professions. Under the authority of Chapter 493, F.S., the Division of Licensing licenses and regulates the private investigative, recovery, and security industries. It is the division's responsibility to ensure that only knowledgeable and qualified individuals are

licensed to perform regulated duties within these professions.

The second program is more ministerial in nature. This program involves the issuance of licenses to citizens that authorize those individuals to carry concealed weapons or firearms.

When the Legislature passed the Jack Hagler Defense Act in 1987, thus promulgating the law that implemented the concealed weapon licensing program, it was claiming its right to regulate the bearing of firearms while at the same time ensuring that citizens would retain the right to keep and bear arms for purposes of lawful self-defense. Acting in accordance with the provisions of Section 790.06, F.S., the Division of Licensing ensures that only qualified and law-abiding citizens are licensed to carry concealed weapons.

Thus, while these two programs differ on fundamental points, the division's administration of these programs has a common final goal: to enhance public safety and to promote the general welfare of Florida residents and the state's many visitors from other states.

In fiscal year 2006-2007, the Division of Licensing received 176,937 new and renewal applications, and issued 111,838 new licenses while renewing 65,099 existing licenses. By the end of the fiscal year, the number of licensees in both programs reached 582,172, the highest licensee population in the division's history.

This increase was fueled by the continuing upward trend of recent years in the number of Floridians and visiting U.S. residents seeking to obtain Florida Concealed Weapon or Firearm Licenses. While the number of individuals and agencies licensed under Chapter 493, F.S., increased by only 3 percent,

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the number of concealed weapon license holders increased 14 percent, from 384,648 at the end of fiscal year 2005-2006, to 438,864 at the end of last fiscal year. This is a net increase of 54,216 license holders, and it is the largest annual increase in the number of license holders since the inception of the concealed weapon licensing program in fiscal year 1987-1988.

This upward trend in the number of citizens holding concealed weapon licenses may more accurately be described as an upward spiral. Compare the program benchmarks from its first decade to the benchmarks of its second. The division issued the first concealed weapon license in October 1987. During that first year of the program's existence (only nine months long), the division issued 32,814 licenses, and at the close of fiscal year 1996-1997, the number of licensees stood at 204,695. Now, at the close of fiscal year 2006-2007, nearing the 20th anniversary of the inception of the program, the total number of license holders is 114 percent greater than it was 10 years ago.

One of the reasons for the popularity of the Florida concealed weapon license is that it is recognized by so many other states. In 1999, the Legislature enacted a provision in the state's weapons and firearms law that allowed Florida to enter into reciprocity agreements with other states. When the law took effect on July 1, 1999, authorities in eight states had notified the Division of Licensing that they would honor concealed weapon licenses issued by Florida. The number of reciprocity states has increased significantly since then. In January 2007, Kansas became the 30th state to agree to honor Florida concealed weapon licenses. West Virginia became the 31st state on the reciprocity list shortly thereafter.

As the number of applicants and licensees continues to expand, so too does the number of telephone inquiries received by the division's Public Inquiry Section. In fiscal year 2005-2006, the Public Inquiry Section responded to 153,395 telephone calls, an increase of 18 percent in the number of calls received in fiscal year 2004-2005. Last year, the telephone staffers responded to 158,750 calls, another all-time high and an increase of just less than 4 percent from the previous year.

Regulatory Activity

The slower growth of the regulated industries was reflected in the lower numbers of complaint investigations in the compliance inspections completed by the division. Investigators in the Bureau of Regulation and Enforcement completed 1,550 complaint investigations in fiscal year 2006-2007, compared with 1,778 in 2005-2006. They also conducted 4,046 compliance inspections, down from 4,709 the previous year.

Bureau investigators were also busy with another special assignment. Seventy thousand spectators gathered in Dolphin Stadium in Miami on February 4, 2007, for Super Bowl XLI. The level of security at this event was unprecedented. Compared to the last time Miami hosted the Super Bowl, in 1999, the 2007 event involved nearly twice the number of police personnel and much greater coordination and cooperation among the more than 70 federal, state, and local government agencies involved.

The Division of Licensing was one of the agencies that contributed to security operations for Super Bowl XLI. Just as it did in 2005 for Super Bowl XXXIX held in Jacksonville, the division reviewed and approved license applications for additional security personnel to assist with crowd control and

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crime prevention. A task force of Bureau of Regulation and Enforcement investigators from throughout the state was assigned to Super Bowl XLI. These investigators were stationed at hotels, team training camps, practice fields, and the many other events leading up to the game to ensure that licensed security officers present complied with all statutory requirements and operational protocols. The bureau initiated administrative action against several security agencies whose personnel were not in compliance with the law during the course of Super Bowl week.

Despite the lower numbers of complaint investigations and compliance inspections, the number of administrative actions – consisting of license denials, suspensions, and revocations – in both programs exceeded expectations. The division completed 11,753 administrative actions in fiscal year 2006-2007, up almost 11 percent from the previous year.

Optical Imaging Technology

The Division of Licensing marked a technological milestone during the last fiscal year. This milestone involves the innovative way in which the division uses optical imaging technology.

The division receives thousands of applications for licensure every month. Each application package includes an application form, a color photograph, a fingerprint card, training documentation, and other documentation to confirm eligibility for licensure (citizenship documentation, medical records, court documents reflecting dispositions of criminal charges, etc.). Faced with the problem of an increasing workload and enormous quantities of paper, division management decided to implement the use of scanning technology in the late 1990s.

Since that time, all incoming mail is arranged into batches of approximately 10 documents each and scanned into a document management system. All division employees are linked to the network so that anyone who needs to view a document can do so, regardless of whether that person is located in Tallahassee or in one of the eight regional offices.

The division further enhanced this technology in January 2003 when it implemented optical character recognition technology. This allowed documents to be automatically scanned and indexed according to the coded information that appeared on the application forms. The results have been remarkable. Despite the ever-increasing workload, the division has managed without having to increase the number of employees required to continue operations.

The major milestone occurred on September 21, 2006, when the division scanned its one-hundred-thousandth batch. Again, conservatively assuming that each batch contains 10 documents, this means that the division scanned its one-millionth document on that date.

Training and Development Section

To ensure optimal service to the citizens of Florida, the Department invests in its employees by providing numerous training, educational, and recognition opportunities. The result is a superior workforce that performs by the motto of “personal commitment and professional pride.”

Training

The high quality of service the Department provides is attained and maintained by the training its em-

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employees receive. That training begins at hiring and continues throughout the career of each employee, thus increasing their knowledge, skills, and abilities. This fiscal year, a total of 1,463 employees participated in Department-wide training classes, such as New Employee Orientation, Team Building, Stress Management, Time Management, Diversity, Leadership, Department Supervisory Standards, Conflict Resolution, Meetings Management, Train the Trainer, Advanced Train the Trainer, CPR/AED, and various software titles. This year, the Department provided Internet-delivered computer classes offered by New Horizons to 130 employees. The Training and Development Section also assisted other divisions with their design, development, and evaluation needs.

The Training and Development Section works in conjunction with the Bureau of Personnel Management to provide many of the training sessions identified above, especially the New Employee Orientation and Supervisor Skills training. In addition, the Bureau of Personnel Management trains staff on a variety of topics on an ad-hoc basis as needed. Topics include performance appraisals, attendance and leave, Americans with Disabilities Act regulations, and benefits.

Education

Twenty-two employees who continued their education by taking work-related classes received tuition reimbursement from the Department, and 153 employees participated in the state's Tuition Waiver program. These employees further developed their ability to contribute to the Department by taking classes at universities, community colleges, and technical centers throughout the state.



A total of 55 Department managers participated in the Certified Public Manager Program. This two-year program is a systematic approach to training and developing governmental administrators in order to improve their performance and the performance of government. Currently, the Department has 188 managers on staff who have successfully completed the program and received the designation of Certified Public Manager. The knowledge gained by these managers provides a framework for continued quality leadership throughout the Department.

Ensuring Employee Excellence

Awards

The Department not only encourages lifelong learning, it rewards those who attain exemplary achievements. Ten nominations were successfully submitted for a Prudential Financial-Davis Productivity Award, detailing the extraordinary efforts of 76 individuals, and approximately \$2,343,890 was saved by employees' initiatives and hard work.

The Department also recognizes employees for their length of service. Approximately 503 employees were awarded certificates for their continued service to the Department.

Minority Businesses

The Department of Agriculture and Consumer Services spent approximately \$13.6 million with certified minority businesses during the 2006-2007 fiscal year. The Department continues to be one of the leading agencies in minority spending. As a state agency, the Department strives to make minority business spending a priority.

Agriculture Management Information Center (AGMIC)

Training

"Data Dos and Don'ts" employee security training video was updated and released on DVD and the Intranet. This training, presented in person to all new permanent employees at New Employee Orientation, is now available for viewing by OPS/contract employees and as a refresher, as needed, to all employees.

Infrastructure

The divisions completed migration of all applications from the UNISYS mainframe, allowing AGMIC to decommission the equipment.

Disaster Recovery Planning and Testing

Over the weekend of May 18-20, 2007, AGMIC staff performed its annual exercise of the recovery of computer applications residing on hardware platforms which AGMIC maintains. This disaster recovery test was performed at SunGard's facility in Carlstadt, New Jersey, which is the same site utilized for the 2005 and 2006 disaster recovery tests. This was a coordinated effort between AGMIC and division staff who tested the applications remotely from Tallahassee. Building on the exercises from years past, Virtual Private Network (VPN) technology was utilized to prevent an interruption to production processing, while still allowing for remote testing between the New Jersey facility and the disaster recovery lab located in the Nathan Mayo building. This year's test included the recovery of the following applications:

- Administration: COOP and Personal Assets System (CAPAS)
- Agricultural-Environmental Services: Suntrack Entomology and Compliance
- Agricultural Law Enforcement: Case Management System
- AGMIC: Exchange 2003 Electronic Mail System
- Food Safety: Chemical Residue Database
- Forestry: Time Allocation Accomplishments Reporting System
- Fruit and Vegetables: Realm System
- Marketing and Development: License and Bond System
- Standards: LP Gas Database

Ensuring Employee Excellence

All nine of these applications were first restored in the test laboratory. This practice allowed for additional findings and remediation, along with properly documenting the application's recovery steps. These recovery materials and documentation were then put to test under disaster recovery conditions. Division users performed a documented verification from the disaster recovery lab in the Mayo building. All applications were successfully recovered with no outstanding issues remaining. The Disaster Recovery team credits the success to the preparation accomplished in the test laboratory. It is a demonstration of the recoverability of the Department's mission-critical applications.

Customer Service Submission Form

The Department amended its main external webpage to provide an easier and more effective means for Department Customers to share their suggestions and comments with the Department. To make a suggestion or comment or file a complaint regarding the services provided by the Department, go to the Customer Service Submission Form.

COOP and Personal Assets System (CAPAS)

The Department has developed an important new tool that is vital to its Continuity of Operations Plan or COOP. This new tool is two-fold. First, it assists in the management and tracking of Department-issued assets such as purchase cards, car rental agency cards, telephone calling cards, security badges, and network IDs. Secondly, it maintains employee emergency contact information that is needed for the Continuity of Operations Plans in the Health, Safety, and Security Manual. The database that has been developed to manage these assets and employee emergency information is known

as CAPAS, which stands for COOP and Personal Assets System. To ensure the information in the CAPAS application is accurate and current, supervisors maintain, on an ongoing basis, emergency information related to employees: physical work location, COOP mission essential function, emergency notification information, COOP or health, safety, and security roles, and Department-issued assets. Having such an application will make the Department much better prepared to respond to emergencies. This new application received a Davis Productivity Award this year.

Office of Inspector General

The Office of Inspector General (OIG) is established in accordance with Section 20.055, F.S. The OIG provides a central point for coordination of and responsibility for activities that promote accountability, integrity, and efficiency in government.

The mission of the OIG is to protect and promote public integrity and accountability within the Department through audits that detect fraud, waste, and abuse and the investigation of criminal and administrative violations.

The goal of the OIG is to decrease the reoccurrence of such violations through employee awareness and cooperation while providing the Department with a timely, accurate, objective, and useful work product. The OIG also strives to enhance public trust.

The OIG is comprised of two sections to accomplish these responsibilities. The following provides detailed information about each section's responsibilities:

Ensuring Employee Excellence

Auditing

The Internal Auditing Section provides independent, objective assurance and consulting services to add value and improve the Department's effectiveness in risk management, control, and governance processes. An assurance service is an objective examination for the purpose of providing an independent assessment or opinion in regard to the particular engagement's objectives. A consulting service is an advisory and client assistance service, the nature and scope of which is agreed upon with the client for each particular engagement.

Internal audit activities are performed in accordance with the Standards for Professional Practice of Internal Auditing published by the Institute of Internal Auditors, Inc. Audit projects involving information technology are also conducted in accordance with the Standards for Information Systems Auditing published by the Information Systems Audit and Control Association.

During fiscal year 2006-2007, one assurance engagement was conducted covering revenue collection. The auditing section also participated in eight consulting services and coordinated eight external audits or reviews by federal and other state agencies.

Investigation

The Investigation Section handles administrative and criminal complaints. These complaints are received from a wide variety of sources. OIG investigations may fall into one of two categories. One type would be a preliminary inquiry, which may be conducted in circumstances when it is necessary to determine the validity of a complaint prior to the initiation of a formal investigation. The other type

would be an Inspector General investigation, which is a formal investigation conducted in accordance with Florida Statute and/or Department policy and procedures. The following are the OIG's key investigative responsibilities:

- Initiate, conduct, supervise, and coordinate investigations designed to detect, deter, prevent, and eradicate fraud, waste, mismanagement, misconduct, and other abuses in the Department.
- Receive complaints and coordinate all activities of the Department as required by the Whistle-blower's Act.
- Receive and consider the complaints and conduct, supervise, or coordinate such inquiries, investigations, or reviews as the Inspector General deems appropriate.
- Conduct investigations and other inquiries free of actual or perceived impairment to the independence of the Inspector General when it is necessary to determine the validity of a complaint prior to the initiation of a formal investigation.

During fiscal year 2006-2007, the Investigation Section carried eight cases over from the previous year, opened 79 new cases, closed 78 cases, and carried forward nine cases to the next fiscal year.



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